RAILROAD MAGAZINE

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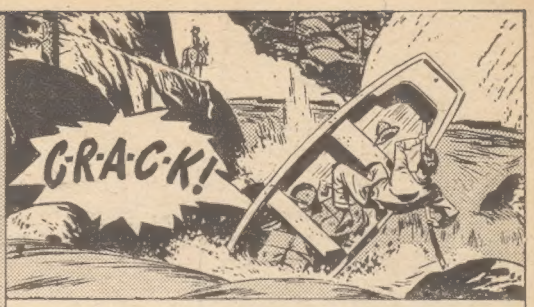

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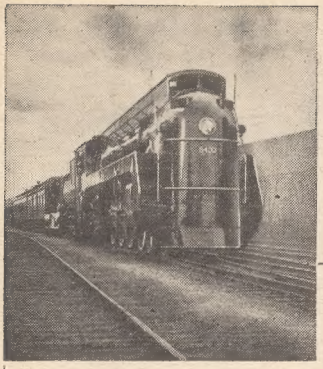

RAILROAD MAGAZINE

Originally Railroad Man's Magazine, founded 1906

November, 1947 Vol. 44, No. 2 25 Cents

Cover: *"Daylights" in the Sun (Southern Pacific)* by Frederick Blakeslee

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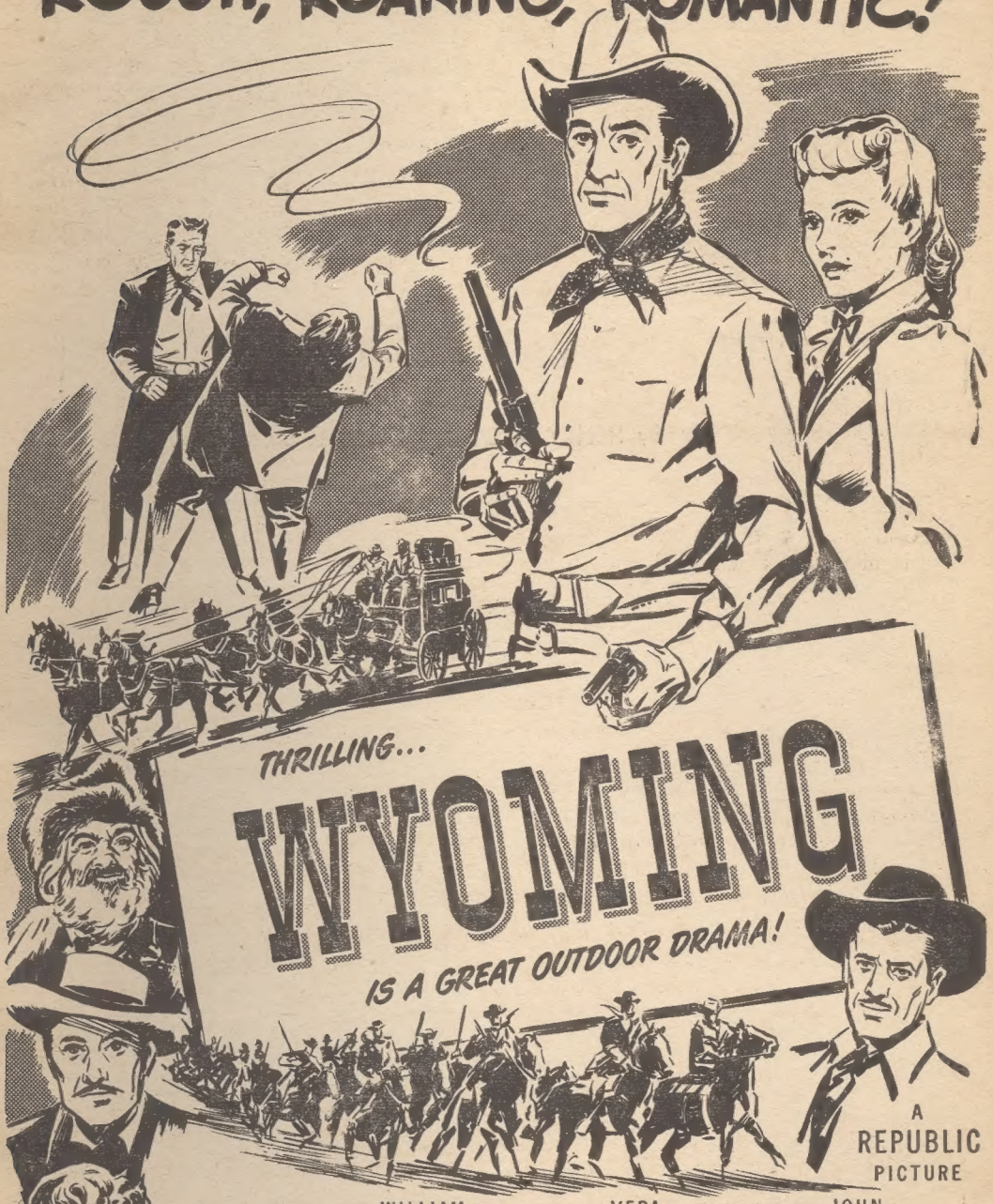

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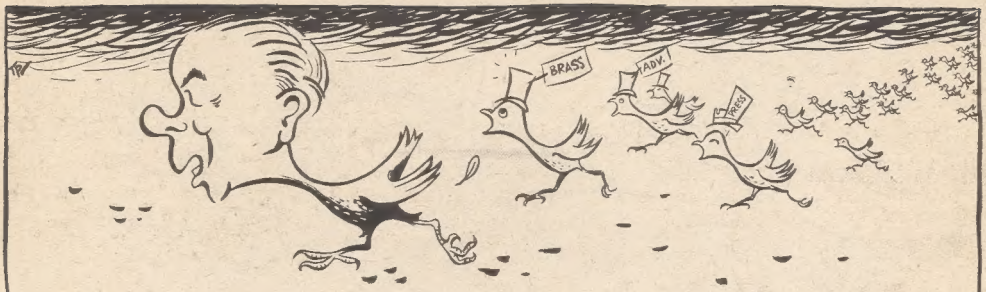


"The Sky Is Falling"

By HENRY B. COMSTOCK

ROBERT YOUNG, the Galahad of the Gondolas, whose advertising menagerie of kittens and hogs has captured the public fancy, is equally aware of the guileless charm of juvenile story books, as he proves in his latest attack on monopolistic railroad practices. Shouting that it's time to wake up Rip Van Winkle and get the grain cars rolling, he points an accusing finger at the western railroads for maintaining identical freight schedules between Chicago and Pacific coast terminals, despite a wide disparity in route mileage. He is also deeply disturbed by the fact that America's blundering old-line railroad managements operate only three-fourths as many freight cars today as they did in 1927.

Mr. Young, in addition to his "godamless" flair for banking, is a born showman. He knows that there is more to the story of the present car shortage than an old gent sleeping off a prohibition-days' bun. But he is also aware that a half-truth, interestingly told, makes for better advertising copy than a confused and pedantic case-history. No one needs to remind him the R. Van Winkle did a pretty good job of somnambulating with that criminally depleted boxcar fleet when every other mode of transportation failed in 1943. We don't know who it was who slipped in under the cobwebs and threw out the old archbar-truck jobs, replacing them with steel units of from fifty to one hundred percent greater carrying capacity on a ratio of three to four, but it looked like good enough arithmetic in 1942. Someone, too, did a pretty fair job of bowling on the terminal greens when WPB's offer of two-by-fours and warped sheathing didn't start a stampede of the car building plants the following years.

Robert Young knows, too, that the return to the peace-time, five-day work week means delay on shipper sidings far in excess of any time that could be made up by resorting to a spectacular freight speed war. We've seen these contests staged in the past and they've always ended in a draw, with the big hook on its siding, and its fires banked. Wonder if Bob saw those figures released by the ICC on the number of rail accidents in the first six months of 1947? They were up 1122 over the same period last year and the principal cause appears to have been excessive speed.

No, it looks from this cupola seat as though the C&O boss had been thumbing through his childhood classics again and had come up with the one about the wheat seed and the downy chick. She got an enthusiastic following when she hollered that "the sky is falling, leave us run and tell the King!" The trouble was, most of the hangers-on didn't have all the facts.

Keeping Pace with a Production Peak

● America's production curve has climbed to an all-time peacetime peak!

Keeping pace with this performance has kept the railroads coming and going: coming to factory and mill with the raw materials industry needs; going to market with the finished products.

Add to this industrial production peak a record-breaking performance by the American farmer and you get a measure of the job the railroads are doing. During the first six months of this year, your railroads hauled *more tons more miles than ever before in peacetime!*

When the war ended, the railroads had on order 35,000 new freight cars. Since that time, these cars — plus another 40,000 — have been built, and the railroads have ordered *still another* 105,000. But it has not been possible to get these cars built fast enough to replace those worn out in wartime. As a result, today the railroads are hauling this biggest peacetime traffic in history with fewer cars than they had on V-J Day.

More cars are on the way. Until they arrive, however, railroads must do the best they can with what they have and can get. There are bound to be some delays in furnishing all the cars needed by American industry today. But you can be certain that the railroads — with the continued help of the shippers — will keep on doing their level best to speed these products to the market places of the nation.

AMERICAN RAILROADS

THE NATION'S BASIC TRANSPORTATION

Snow On the Rails

By HARRY M. TREAT

THE WINTER of 1906-'07 in Maine, a state noted for its cold winters, was one of the most severe seasons known to me. I began my railroading career for the Maine Central when I was a lad of 16 and remained continuously with that road as operator, train dispatcher and chief train dispatcher until I was retired in my 65th year, piling up a creditable record. My story is true in every detail and a most singular case of preventing a head-on collision in the days when Maine Central freight trains were only half equipped with fast-working airbrakes.

In 1906 and 1907, I was covering a second trick as train dispatcher in the Portland office, which then handled 385 miles of track, mostly single. We had been taking care of 520 miles in Maine, New Hampshire and Vermont, but winter conditions had made it necessary for the company to establish a Waterville office also, thus relieving us at Portland of 135 miles, all east of Waterville and all single track except six miles.

In those days we had no block signals, no train-order boards, no Hours of Service regulations. A red flag or red light displayed from the window frame at the front of the station was the train-order signal. Regulations required that an operator must not repeat a train order to the dispatcher until after he had displayed that signal. His action in repeating an order was to acknowledge that he had properly displayed the signal.

I had been dispatching for about five years and had recently passed my 26th birthday. One morning in late January, 1907, a superintendent's clerk came to my boarding place with a note from the super to the effect that every Waterville dispatcher but one had been taken sick and that I should accompany the super to Waterville on No. 3 at 10:15 a.m., prepared to stay for a week or so. Arriving at Waterville, we found that the sole healthy dispatcher could not be left alone on a night trick, so the superintendent decided to stay with him on his trick from 7 a.m. to 7 p.m., while I was to take over the rest of the time.

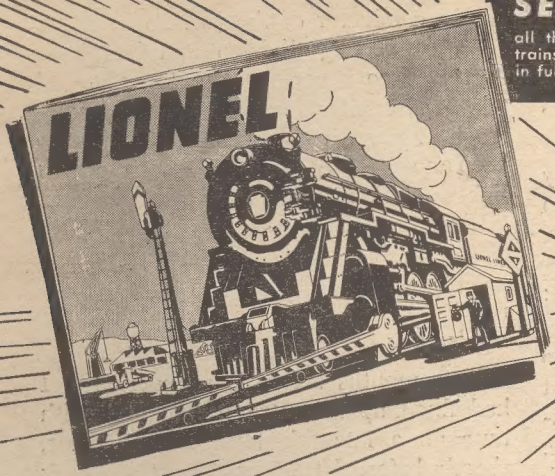
For six long weeks the temperature had been so low that the sun had no effect on the snow. Every few days some more snow would fall, so there were several feet on level ground, more or less blown in to make the wheeling very bad. The snow was so dry that much of it rolled back on the track after being plowed. Our heaviest power at that time consisted of twenty-two Alco ten-wheelers of 31,000 pounds tractive effort.

The westerly end of Waterville freight yard was about one-half mile east of the passenger station which housed the dispatching office on its second floor. For about a mile the freight yard extended east and was bordered on the south side by the Kennebec River. The main line ran along the north side of the classification tracks and, after about 1½ miles, curved to the right to cross the river, thence cutting through West Benton village and beginning a fairly stiff grade through ledges and curves, after which the track strengthened as it neared Clinton, six miles east of West Benton.

West Benton had an agent-operator but no Sunday service. Clinton boasted continuous wire service. We seldom met freight trains at West Benton unless the westbound was short enough to clear on the siding. Westbound trains were expected to be in clear in time to avoid stopping eastbound traffic on the grade.

"I will never forget Sunday, February 3rd. At about 5:15 that morning I put out an order at Clinton for No. 26, a westbound freight, to meet No. 39 at Clinton. I placed the order to 39 at Waterville yard office after the night yardmaster had

SEE—
all the newest LIONEL trains and accessories in full color.



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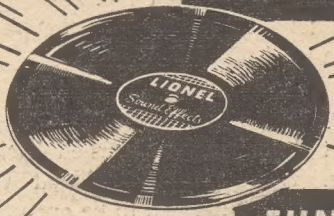

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With LIONEL Trains is a 32-page book of exciting things to do with your railroad.

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☐ I enclose 10c for catalog only.

NAME_____

CITY_____ ZONE_____

STATE_____

phoned me that his yard was in bad shape and that it would be tied up still worse if we did not get No. 39 out for the meet with 26. Both trains were about six hours behind schedule.

About 5:45 a.m. Clinton frantically called me, reporting that No. 26 had run by his red light. I leaped to the phone, called the yard office, and asked the operator if he could hold No. 39. He replied: "No, they are on their way."

Almost despairingly I turned back to my desk. Although I knew that West Benton was not supposed to be open Sundays, I began calling him on the wire, monotonously tapping out: "BN, BN, DS." At length, to my surprise, West Benton answered; and I transmitted, "Kick off your semaphore and run the other way with a lantern to stop a head-on." The word came back "OK." I fell back in my seat, stunned by the fact that BN had actually answered my call.

In about fifteen minutes, a cheering message flashed over the wire from West Benton: "Got 'em OK. They will meet here."

Had it not been for the agent-operator being in the depot unexpectedly, those two freights would have met in the ladges, with No. 39 working steam down in the corner and No. 26 sliding down the hill, in a combination of pre-dawn darkness and thick icy vapor rolling up from the river.

An investigation followed and the facts were brought out. Owing to the intense cold, the West Benton agent had decided to arise early that morning and go to the station to see that his stove fire there was satisfactory and to fix it for the next twenty-four hours. As for the Clinton night operator, he testified that instead of walking a few feet in the extreme cold to hang his red light properly, he had decided to step out from the front door when the train came and 'swing them up' to stop.

However, he either fell asleep or forgot about the train order and did not get out with his lantern in time.

The conductor of the No. 26 belonged on a connecting division and had been borrowed to cover the run for a round trip. He testified that his lack of knowledge of our division had caused him to keep an unusually sharp lookout for switch lights, station lights and other signals. Going through Clinton he was standing at the rear door of his caboose and saw someone appear on the platform with a red light *after the cabooose was several car-lengths by.*

Two months before this experience, I had fixed up an extra freight east with time on a late scheduled frieight west, shortly before I transferred to third trick at 11 p.m. The crew of the extra tried stealing a little time to make a certain siding, but the two trains met head-on about three miles west of that siding, killing four men, including both engineers, and causing much damage to equipment. That occurred December 8, 1906, about 12:45 a.m. The temperature was then below zero.

Yes, 1906-'07 was a tough winter, and from that time on I dreaded the approach of cold weather. In my scrapbook is a clipping from the Portland *Press Herald* dated December 8, 1931, reading as follows: "25 years ago today: Forest Fletcher, South Portland; A. R. Harriman, Portland; S. H. Hodges, Portland, and A. E. Lowe, Lewiston, killed in Maine Central collision between Waterville and Portland near Annabessacook station. Three others seriously hurt. Mercury below zero. Coldest morning yet."

I might add that the superintendent and the one train dispatcher who worked with me in Waterville that Ferbruary day in 1907 are both dead, while the other dispatchers connected with that office are no longer in the Maine Central's employ but are scattered here and there, some of them deceased. However, the efficient West Benton man who responded unexpectedly to my emergency call is still in service and is now holding first trick in the tower-operator position at Tower 5, Portland.

AIM AHEAD

You rarely see a marksman aim directly at a bird on the wing. In most cases, he sights in front of it — "leading the target," as he calls it.

What's true in this field of sport is equally true in the field of business. **You've got to aim ahead to get ahead!**

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Canada Rolls Its Own

WHEN you take your first look at the Canadian National Railways System, you feel like the major who was transferred to the Pentagon building in Washington. "It's not that it's so big," he told his wife after his first day in the huge structure, "but there's just so darn much of it!"

In length of trackage, our Canadian cousin is tops among the big railroads of North America. To save a trip to the Atlas, here are the comparative figures; Canadian National, 23,545 miles; Southern Pacific, 15,345 miles, Santa Fe, 13,117 miles. And here's another 'fact we never checked before'—Canadian Pacific, no relation to CN but the other member of Canada's Big-Two, is larger than any American line, with a trackage total of 22,315 miles!

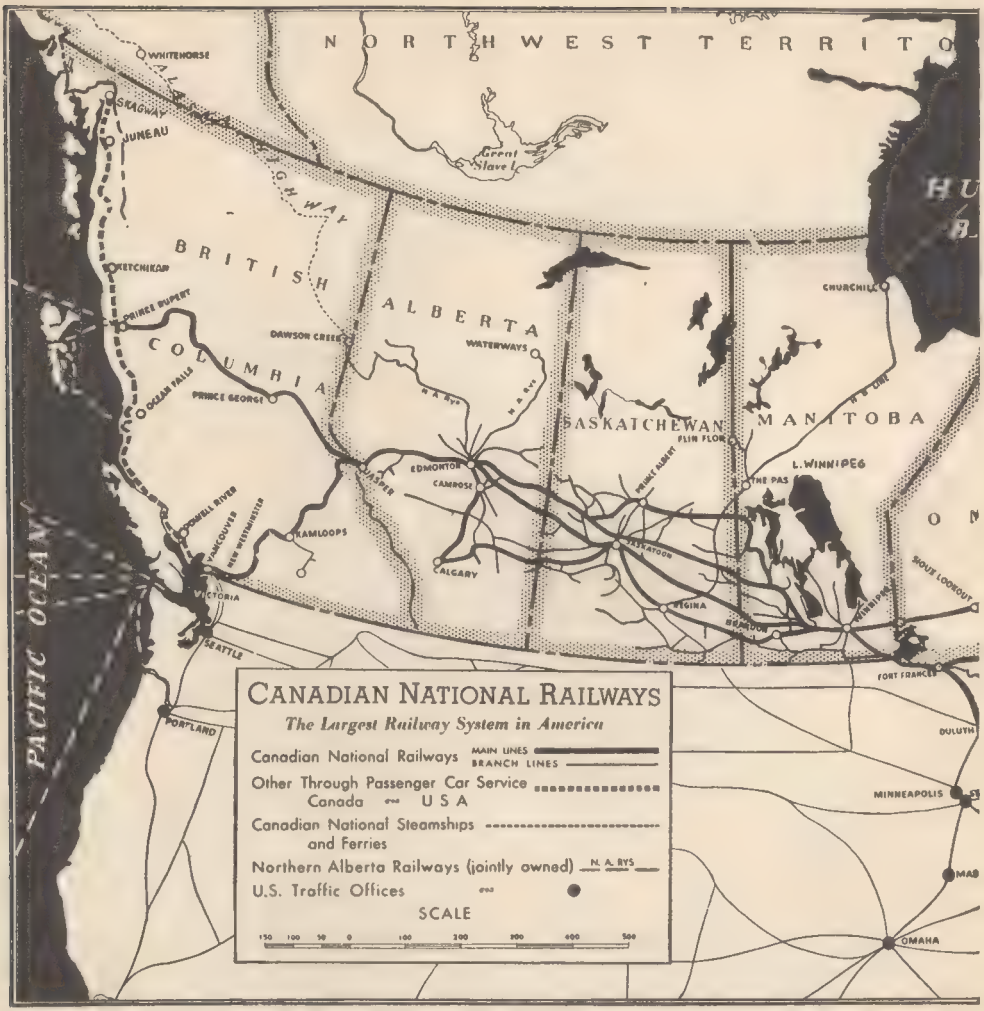
Canadian National gains in stature if, in addition to trackage, we include its self-operated express and telegraph lines, the nine huge hotels operated by the railroad in some of Canada's most important cities, the three resort hotels it maintains in season, and its steamship and airlines. Payroll for the big road tops $200 million annually, while it spends as high as $100 million a year for material and equipment. This puts it in a class by itself as the largest employer and the largest individual buyer in the entire Dominion.

If you have a week to spend, try riding one of the Canadian National's main arteries, covering 4716 miles across Canada from Prince Rupert in British Columbia to Sidney, Nova Scotia. This is the route traveled west from Montreal by the famous *Continental Limited,* one section of which serves Seattle, Washington, via GN and NP connections, and the *Scotian* and the *Ocean Limited* on the Atlantic end. All of these trains are, of course, first class . . . in the rule book sense and in their equipment. You can ride sleeper or coach, whether you occupy regular, tourist or solarium compartment lounge cars depending on the make-up of certain sections which may be traveling to the city you care to visit. The solarium car, for instance, operates in Numbers 29 and 30.

At more than fifteen points over this long run your train will be coupled with sleepers, which will converge on or leave your train at different junctions, so wide is the area

By WILLIAM L. ROHDE

CONICAL NOSE on this 4-8-2, first of twenty Mountain Types outshopped at Montreal in 1944, gave the Class its nickname: Bullet-Nose Betties. Semi-streamlined, with neatly housed after-cooler and British-type capstack, the engine was designed for fast passenger service



served by this particular CN main line. The passenger department likes to point out that the Canadian carrier has two transcontinental routes; and it has, if we don't quibble about one short section through Jasper National Park in the Canadian Rockies over which both lines must pass. In fact, almost any ticket agent can figure out five different ways to travel from coast to coast over trackage the majority of which is CN. The itinerary will include one or two coinciding points, but all of the routes are fascinating and offer something different.

The CN's Grank Trunk area does a Class 1 railroad business in itself, tapping the cities of Chicago, Detroit, and Toledo, Ohio. This network blankets Central Michigan. The Chicago-Toronto-Montreal main line constitutes a major portion of the double-tracked CN. Much of the balance of its vast network is single iron, the type of territory that calls for top dispatching. In order to serve the rush of wartime business from Halifax, Nova Scotia, automatic traffic control was installed over some of the Atlantic Region mileage, and has handled traffic that otherwise would

have been a hot-spot for the train-order men. On March 23, 1945, trains numbering 382 were moving over this section of the Canadian National, while a postwar arrival of the *Queen Elizabeth* required 27 special trains!

The Canadian line reaches through New England to New York, via the Central Vermont, and this extension keeps pleasantly busy hauling freight under the advantageous differential freight rates. The northern segment of the CV, from White River Junction, is a valuable feeder for passenger traffic, traveled by Boston-, New York, Washington through trains.

An interesting vacation attraction for the person who wants to see an unusual part of the country is the Churchill-on-Hudson Bay extension, the northernmost line of railroad in America, excepting the Alaska lines. There is sleeper service on this run, and a buffet parlor car, operating in a mixed train once a week.

Cross-continent travelers on the Canadian National have long enjoyed the through-car service denied most U.S. passengers, who are delayed by necessary transfers in Chicago and St. Louis. Incidentally, Chicago is tapped from both sides by the big

road. Grand Trunk's busy, main line reaches the Windy City from the east, to Duluth, Minnesota, enters Chicago via the Soo Line and the Chicago & Northwestern.

Our neighbor railroad also makes United States connections in New Hampshire and Maine, where a line comes down to Portland, while a busy right-of-way from the east reaches the important terminal of Vanceboro, in the same state. The State of New York is entered at Buffalo and by a line to Massena, which offers passenger service as far as Fort Covington, N. Y. If we allow for the separate operating procedures required by international law, and if we don't quibble about the amount of traffic, it may be said that the Canadian National Railways operate in nine of the United States! Another U.S. tie is the possession of coal mines, purchased years ago by the Grand Trunk, in Ohio.

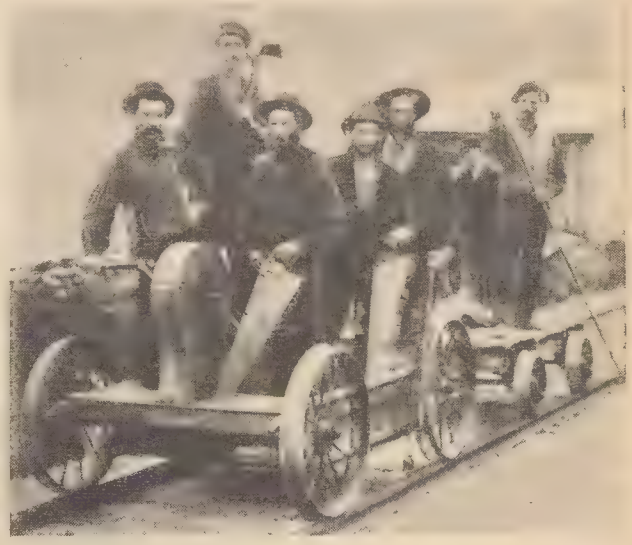
No, the largest railroad in North America wasn't meant to be that way, but a lot of fine, well-thought-out planning went into the integration of the system and its many ramifications.

It was over a hundred years ago that forward-looking Canadians began to consider the possibilities of all-weather wagons and of fixed roadbeds. About the same time groups of men in the United States were putting flanged wheels on stagecoach bodies and hauling them along rails by horse and steam power. In 1836 the St. Lawrence River and the Richelieu were connected between Laprairie, Quebec, and St. Johns, now the meeting point of the CN and CV. This first Canadian railroad was built as a portage link, with iron-topped wooden rails, in the fashion of such pioneers as the Quincy Granite Railroad, the Mohawk & Hudson, and the Boston & Lowell.

This was the time when the cry, "Get a horse," was hot stuff. And, of course, the locomotive balked when the first tiny train was due to run, giving the scoffers a grand chance to gallop up and down on their mounts and offer to race the train. But an hour later the little kettle did take off, to whirl the first train of distinguished passengers over the Champlain & St. Lawrence at the snappy speed of seven miles an hour, in the

first demonstration of steam power over the sixteen miles of line. Heretofore, horses had been used.

A few years later, the earlybird Champlain & St. Lawrence was extended to serve Montreal. Its trains were ferried across the St. Lawrence in summer and ran on tracks laid on the ice in winter. The railroad had demonstrated its practicability. A building boom began which was to fling tracks in all directions for the next 75 years. These early Canadian lines were privately-financed operations for the most part; they created



WINTER PRINT of the Champlain & St. Lawrence, prior to completion of the Victoria Tubular Bridge at Montreal. C&St.L's first locomotive, the *Dorchester*, was built by Robert Stephenson & Co. in 1835. By 1859, when Stephenson designed the bridge across the St. Lawrence, the *Dorchester* was already sold to the St. Lawrence & Industrie Village Railway (now CPR)

OLD-TIME section gang at right recalls Canada's Battle of Gages. Earliest lines adopted the Stephenson standard, but later roads, pawns in the rivalry between Portland, Me., and Boston for Canadian traffic, were tricked into adopting the so-called Portland gage of 5 feet, 6 inches. Most broad-gage lines changed to standard between 1870 and 1890

fortunes for a few and lost money for many. In the ensuing wrangles, charges of overbuilding and of political interference and speculation were shouted and written by the volume . . . but in the end, the railroads which had built Canada were taken over by the country. Indeed, there is still need for expansion of the steel trails, and at present new construction is in progress. Many of the rusty lines in the far north which were thought useless, became vital avenues of communication and transport during the recent war.

THE building boom really began in 1847, when an act incorporating the Grand Trunk Railway was responsible for the construction of this line between Montreal and Brockville, up the St. Lawrence near Lake Ontario. Other railroad charters, many of them never acted upon, were granted by the dozen. One road which was completed was the St. Lawrence & Atlantic, built in 1853 to connect Longueil near Montreal with Portland, Maine. It is now a busy link in the CN. The next year the Grand Trunk began the first of a long series of amalgamations and also opened a line from Quebec to Richmond.

In 1855 the Grand Trunk finished its line from Montreal to Brockville, Ont. The following year it pushed on through Toronto to Sarnia, between lakes Huron and Erie and next door to Michigan. At the same time track was laid east from Montreal as far as Riviere du Loup. By 1860 the Grank Trunk Railway totaled 872 miles of right-of-way. Total mileage of all roads in Canada had reached 1880.

The Maritime Provinces, those im-

Courtesy Canadian National

INTERNATIONAL BRIDGE erected in 1855 by John A. Roebling for Great Western of Canada permitted the first east-west train service between U. S. and Canada. On site of old single-track wire and wood suspension span, first successful railroad crossing of its type in the world, Grand Trunk erected in 1897 a doubletrack steel arch which is still in use

portant areas of early development lying nearest the new continent's mother countries, accounted for some of this mileage. In 1858 a line was finished between the busy port of Halifax and Truro, Nova Scotia, and in 1867 extended to Pictou Landing, Nova Scotia. The latter is now a station on a 16-mile branch of the CN main line, reached by motor trains.

Another development to meet the need for efficient transportation in the earlier settled regions of the new country was the line from Saint John, New Brunswick, to Shediac. However, the areas around Montreal, developed first because of the water inlet via the Saint Lawrence, and the rapidly growing Maritime territory on the eastern coast called Eastern Canada, were not linked together by railroad. In 1867, one of the conditions of entrance into the Confederation was the building of a railway, and the job of tieing together its separated areas, each with their own internal railroads, fell to the Dominion Government.

A 500-mile line was built between Truro and Riviere du Loup and opened in 1876. The Government purchased the line from Halifax to Truro, the link to the seaport, and the line from Riviere du Loup to Point Levis opposite Quebec. Thus was born the Intercolonial, opening the heart of Canada to the sea with a quicker, more efficient transportation system than the long sea voyages around the Gaspe Peninsula. At a later date, the Intercolonial Railway secured a route into Montreal under joint arrangement with the Grand Trunk, and Eastern Canada was ready to expand.

While the Intercolonial was supplying the Dominion's physical want, Grand Trunk had been blanketing Ontario with a network of railroads. It extended its main line through to Chicago and absorbed the Great Western Railway in 1882, a move which added more lines in southwestern Ontario.

These rail networks nourished Canada's expansion in the areas around the Great Lakes, and eastward to the Atlantic Ocean. However, the tide of progress soon pushes at all boundaries, and by 1900 a great river of immigration was flowing westward into the prairie country. Freight and passenger traffic promised to reach a flood in the Canadian West, just as it had recently deluged the Western United States. Locked into the section between the Great Lakes, the Grand Trunk was almost shut out from this new, expanding field. Then, many years later, Grand Trunk agreed with the Federal Government of 1905 to collaborate on the construction of a new railroad linking east and west Canada. This westward-ho project, named the Grand Trunk Pacific, was to extend 1,775 miles from Winnipeg to Prince Rupert, British Columbia. Since this western terminus was the closest Pacific port to the Orient and offered good facilities for deep-water vessels, the Grand Trunk Pacific planned to operate a steamship service on the Pacific.

Inherent in this project was the possibility of a coastal service which would tie together Alaska and the United States. Southward, steamships could easily connect at Seattle, Washington, and other Pacific Coast U.S. ports, as well as at Vancouver, B.C. Part of this plan is realized today in a slightly different way by the Alaska Steamship Lines, and the Canadian National Steamship and Ferry Lines.

Courtesy Canadian National

NAMED ENGINE of the Toronto, Simcoe & Lake Huron, incorporated in 1849 to become the Northern Railway of Canada nine years later, was Number 2, the ***Toronto.*** Numbers 1 and 3, also 8-wheelers were the ***Lady Elgin*** and the ***Josephine.*** Driver on the ***Josephine*** was Cyrus Huckett, celebrated in the famous song, ***Dandy Cye of the Josephine***

The eastern division of Grand Trunk Pacific was to be built by the Canadian Government and was to extend eastward from Winnipeg for a distance of 1,804 miles to Quebec. This section was later extended to St. John, N.B., to complete the Transcontinental Railway, which was to be leased to the Grand Trunk Pacific for fifty years.

These plans were completed and the construction job finished in 1914, when the Grand Trunk and Grand Trunk Pacific were operating 7,500 miles of railway across the backbone of Canada. The company had ships in coastal trade on the Pacific, operated large grain elevators at tidewater and lake terminals and had built a chain of beautiful hotels.

The Grand Trunk was doing all right for itself. Meanwhile other financiers were eager to gain the rich profits offered through railroad promotion. In 1901 a little known railroad in Canada was running along quite well hauling grain and other commodities across the prairies. The Canadian Northern came from nowhere and traveled to the same place, but in the new paradise of agriculture there was plenty of local traffic to handle. Its management decided to plunge into the transportation field in a big way, and the boom was on.

From a total of 971 miles in 1901, the Canadian Northern octopused by construction and the extension of control and purchase to 9,362 miles in 1915!

With the beginning of World War I the financial bubble burst. The eyes of the bankers turned to Europe, and the energies of the people themselves were devoted to the war. The Canadian Northern was such a tangled mass of financial wires that it nearly collapsed. To save transportation needed for the war, the Government took the railroad over. Still later, Grand Trunk Pacific was unable to honor its contract with the Government concerning the Transcontinental Railway agreement, and the Government was forced to take these two lines under its wing. Similarly, Grand Trunk had guaranteed many of the obligations of the Grand Trunk Pacific, and at the end of the war, it was carried into the Government network almost on the coat-tails of the Grand Trunk Pacific. By 1922, the Canadian Government was operating a railroad system exceeded in mileage only by the German State Railways, and the Railways of the Soviet Union.

A hard-working executive, Sir Henry Thornton, accomplished the task of tieing the new properties together into a functioning whole. At the same time, he sold the idea of a publicly-owned CNR to the Canadian people. He was aided by the intelligent policies of Walter Scott Thompson CBE, who made Canada and the Canadian National popular by the exercise of public relations procedure at its best. To everyone he contacted, Thompson sold a solid, factual outline of what the Canadian National was trying to do. He made few peppy, "sincere" lectures, but backed up each new advance of the government-owned line as it was made. He greeted writers and newsmen with open arms, and gave them an assistance in their jobs which, in turn, was reflected in the tone of their books and articles.

A lad named Rex Beach gave Canada a lot of free publicity, and Courtney Riley Cooper published thousands of words in the slick U.S. magazines about the Canadian out-

doors. The late Bob Davis boosted Canada in lyric prose, and from England came Harper Corkhill, who toured the country under Thompson's benevolent guidance and wrote a book about Canadian fauna called *Lovable Beasts.*

THE private companies which became part of the Canadian National had acquired or built elevators, hotels, stockyards, steamer and ferry services, land companies, telegraph lines, coal mines, and other properties. In turn CNR became owner of these vast holdings.

The Canadian National Telegraphs, born 100 years ago with the opening on the Toronto, Hamilton, Niagara & St. Catharine's Electro-Magnetic Telegraph Company, maintains 22,800 miles of pole line, and 173,000 miles of wire circuits. It was on December 19, 1846, that Samuel Porter opened the first Canadian telegraph office at Toronto. Sam was manager, Morse man, clerk, accountant, messenger boy; when they gave him a broom, Sam became the direct forerunner of the Western Union managers of today. His first instruments were, of course, the tape recorders, and he had 89 miles of single circuit wire. The same year a company was formed with a capital of 4000 pounds, to construct a line connecting with the New York telegraph line at Buffalo.

The telegraph lines in the Maritimes were for a long time the focal point for all trans-Atlantic news, conveying to Boston information relayed from ships inward-bound from Europe. Those were the days when reporters hired Morse men to telegraph the Bible or dictionary page by page, in order to hold the circuit for their own dispatches and to keep the lines from competitors.

Today all these telegraph lines are part of Canadian National Telegraphs, which in turn is a part of the

great CN. They form the communications nerve network of Canada. During the recent war they handled 48 million messages and two million cables.

Canadian National Telegraphs maintains the circuits used by the railroads, and Morse sounders still chatter in most offices on the lines. Supplemented by teletype, they handle most of the railroad message work, reservations, car tracers, consists, and all the many communications necessary to facilitate the coordination between the many parts of a big transportation system. Train dispatching depends largely on telephone installations, and is only supplemented by telegraph.

The physical picture, then, of the Canadian National of today is gargantuan, even when compared with the size of the original components, many of which were big systems before the separate units were welded into a concrete whole. The combined routes of the old Grand Trunk, Grand Trunk Pacific, the assembled Canadian Northerns, the Intercolonial, the National Transcontinental and the little companies who squeezed under the corporate roof had a total of over 5,000 stations.

If all the present rolling stock were coupled together, exclusive of locomotives, the cars would make a train 853 miles long. The well-ballasted roadbed is spliced together by 5,669 bridges and more than 152,000 culverts, and from coast to coast the hot shots and drags pass through 64 tunnels. Each year the Atlantic to Pacific line moves three million loaded freight cars, and its locomotives cover about 93 million miles!

But with all its sprawling great-

WESTERN CANADA is a country of rich farming and prairie lands. Many railroads were built in advance of the tide of immigration. Colonization and agricultural development undertaken by early private lines has been continued by special CN department organized in 1923. Majority of new settlers are British, Scandinavian and Central European

ness, the CN is not an impersonal railroad. It cannot be, owned and operated as it is by the people and acting to supply the major portion of their transportation needs. Under the direction of men like Sir Henry Thornton, W. S. Thompson, and R. C. Vaughan, present chairman and president, the Canadian National has done a fine job of maintaining good public relations, not overlooking the prime—often disregarded—rule that an effective program must begin at the top.

An example of the sort of policy that makes friends—and headlines—is the recent commandeering of a CN caboose to rush a set of newborn twins from Mountain Park, Alberta, to a hospital in Edmonton. The buggy incubator was kept at high temperatures by the crew, who rode the engine as much as possible.

One of the public-relations victories of the CN is exemplified in the story of a French-Canadian who had objected loudly from his position of influence in a backwoods town against public operation of the railroads. Service was improved, and when Marcel came back from a trip to Winnipeg he told his brother-in-law:

"The Canadian National Railway, she's pretty good. Ver' fast now. When I leave Winnipeg I lean from step to kiss Marie goodby. The train start, and I kiss 'nother pretty girl way down the station!"

At least five children bear the initials C.N., and two are initialed C.N.R. in honor of the railroad. Of these latter, Cecelie Norma Rollande Turgeon, of Montreal was born in

Courtesy Canadian National

CONTINENTAL LIMITED, Montreal and Toronto to Vancouver, winding through solemn stone canyons in British Columbia. In the background is Mt. Robinson, highest peak in the Rockies, which overlooks both the CN mainline and the Prince Rupert line

1931 on a train, and Cameron Norman Roger Dreidger was born in 1932 while Mrs. Dreidger was traveling from Craig, Saskatchewan, to Regina.

The CN twins, Charles Norman Beck and Clifford Norlan Beck, are mentioned in Freeman Hubbard's *Railroad Avenue.*

The Becks live at Reserve, in northern Saskatchewan, where Mr. Beck is employed on the Canadian National as a trackman. Heavy rains barred the route to medical aid at Hudson Bay Junction, thirty miles away, on the night of the twins' birth. No train was available, but the quick thinking trackman put his wife on his gasoline speeder and started for Hudson Bay Junction.

R. C. VAUGHAN, President of CN's Seven-Man Board

Two persons started for the Junction, but four people rode the little car when it arrived! The twins were born enroute and at last reports were well and still enthusiastic about CN service.

The railroad, largest employer in the Dominion, reaches a lot of people. In 1944, there were four John L. Jones, 118 John Jones, and 1,078 varied and assorted Jones working for the CN. If nobody but the Jones said a good word for the CN, the railroad would still have a lot of boosters of business and good will.

The Canadian National goes after business in the conventional manner, maintaining the largest and most widespread group of freight and passenger agents in the world. Not only are there traffic offices in such varied United States cities as Omaha, Nebraska, New Orleans, Louisiana, and Cedar Rapids, Iowa, but CN business is solicited by representatives in the West Indies, Cuba and Hawaii, Australia and New Zealand, and Ireland, England and France.

In Canada itself, departments are maintained to further industrial and commercial development. The Department of Colonization and Agriculture alone plays a part in immigration, land settlement and farm employment too large to be detailed here.

Canadian National Railways owns property in London and Paris. During the war the hotel in Paris was leased to the Hotel Scribe, under the watchful eye of Mr. A. L. Regamey, 1 Rue Scribe. When the Germans moved into Paris they rented the hotel from Mr. Regamey and used it as Gestapo headquarters. Because he was Swiss, Mr. Regamey was able to collect 8,500,000 francs, equivalent to $80,058, from the Nazis as rental between 1940 and 1945. He reinvested this money and actually increased it.

This unusual operation caused an amusing exchange during the session of the Committee on Railways and Shipping in Ottawa in May, 1946:

Mr. Picard: "He collected from the Germans, while they occupied it?"

Mr. Vaughan: "Yes."

Acting Chairman: "Are there any questions. . .?"

Mr. Mutch: "Where is that guy now, we need him!"

Courtesy Canadian National

SOMEWHERE in the Canadian Rockies horsepower meets horsepower in the form of Mikado 3803, whose tractive effort is 60,000 pounds. Five of these Class S-4-bs were outshopped by Canadian Locomotive in 1936

Tourist travel, including the seasonal movements of hunters and fishermen, has long been a standard asset to Canada. The Canadian National goes after the hunters before they go after the game. The best outdoor sections of the Dominion are described in comprehensive handbooks. Additional information is included about game laws, equipment, and how to apply for the necessary permits for trips and hunting and fishing expeditions.

"Just write to us," the General Tourist and Convention Agent urges potential vacationers and sportsmen. "Explain your plans or wishes fully, and we will help you in every way we can." In addition they offer the following wholesome suggestions: "Do not fraternize too freely with your guide or keep him up all night to amuse you. . . . Do not give him intoxicating liquor—it has ruined many a hunting and fishing trip and may, in a pinch, endanger your life."

Sound advice from the land of Bass Ale, Guiness Stout and Johnny Walker!

For more sedentary vacationers, the three fine summer lodges owned by CN offer modern accommodations in some of the most scenic settings in North America. These summer lodges show small operating profits, but most vacationers still come to the magnificent parks via the steel trails and it is impossible to calculate the revenue they draw from travelers who visit them via the railroad.

Jasper Lodge is set in Jasper National Park, 4,200 square miles of mountain playground. From the Main Lodge and bungalows, the visitor can walk to a heated outdoor swimming pool, play the championship 18-hole golf course, canoe, ride, or fish lakes and streams loaded with trout. At Minaki Lodge, 114 miles west of Winnipeg in the Lake of the Woods district of Ontario, you are held down to a nine-hole course with the first tee right at the Main Building. There are boating and motor launch excursions, and . . . no hay fever.

Along the shore of Northumberland Strait, 115 miles from Halifax, Nova Scotia, the third Canadian National tourist paradise is Pictou Lodge, with log bungalows as well as a huge, modern main structure. Each log cabin has an open fireplace in the living room, a complete bath, and overlooks the sea. In addition to the attractions of Jasper and Minaki, Pictou has surf swimming and deep-sea fishing.

LEST we forget that the CN is in the hauling business, let's visualize the amount of freight carried one ton mile in an average good year—*35 billion tons.* In the 98,388 freight cars that were on the roster last year, the road carried 79,941,296 tons of revenue freight to reap a freight income of $316,533,329. Bituminous coal topped the list of commodities, with nine million tons. Wheat came next, eight million tons of bread base, and pulpwood and lumber moved at the rate of four million tons each. Trailing the big movers were anthracite and stone, two millions each. Manufacturers and miscellaneous added some ten million tons.

Over thirty million passengers rode the Canadian carrier, putting $65,000,000 into the ticket agents' tills for the rides. They rode in the 3,300 passenger cars of all types which the railroad operates, including its own diners, sleepers, and colonist cars. Some of these travelers

were visitors from the United States, and there is beginning to be a flood of tourists to the Dominion as post-war vacationers realize those long-delayed trips to Nova Scotia, Ontario and the Lake of the Woods, or magnificent Jasper National Park. Then, too, many thousand of emigres now living in the United States will go home to Canada to visit the old folks . . . and that's where American ticket agents start to sweat. The CN timetables are printed in French and English (the reports of the Dominion Committee on Railways and Shipping are printed in 500 English and 200 French copies), and because sometimes three or four changes are necessary for a trip to the old home town of Valee Lourdes, or Tatamagouche, or Deux Contagnes, the new ticket agent in Trenton, New Jersey, or La Jolla, California, will start to rub his or her worried brow and consider telegraphing the general passenger agent's office for correct rate and routing. Many a traveler to Canada, appearing at the last minute for a ticket to Cheecham or Waskateneay, Alberta, has been sold transportation to the next interchange point or large city for which the ticket agent has a printed ticket and advised to purchase his through coupons there. This is an ordinarily practical, if not approved, proceeding which at least gets the passenger on his way on the train he wants to take.

Nearly every train crew in the land of the maple leaf has some member who can speak French, so that language problems cause little difficulty. However, the story is told of the pret-

LEFT: Central Station, Montreal, heart of the Central Region. In 1929, year in which CNR acquired five more railroads and over 600 added miles of line, the System spent $50,000,000 on Montreal terminals

RIGHT: Example of one of the new bedroom-buffet-lounge cars designed and built in the Montreal Shops. Currently, rejuvenation of all rolling stock is going forward in each of the five regions of the System, with work being done in the company's own shops

BELOW: Preponderance of British and foreign locomotives on Canadian rosters in early days has left little imprint on present-day engine design. This Northern Type of the U-4-a Class is one of the 203 4-8-4s now in service

ty *mademoiselle* who boarded a local to Quebec on which the trainmen and few travelers spoke only English. Marie, as pretty and ingenuous as eighteen years on the farm could make her, spoke only in French.

"Now, where would you like to go?" the conductor asked as they rolled away from the country station. Marie had no ticket.

Photo from J. A. McLellan

PACIFIC TYPE, 5580, dates from 1914 but is younger than the gas-lighted and stove-heated wooden coaches she drags. Shot shows Fort Erie-Stratford, Ont., local leaving Port Colborne. The Niagara, St. Catharine & Toronto also operates in this vicinity

The brakeman joined in as Marie sputtered smilingly in French and nodded yes to every question. "Ou est alley?" he stumbled. That only made it worse, as Marie now bombarded him with chatter of which he understood not a word except for one that he thought might be "Quebec".

No fare was collected, although Marie offered a small roll of bills, until another passenger boarded the train at the station before Quebec. The newcomer spoke the girl's language.

"Where to?" the skipper asked him hopefully after the girl had talked for two minutes.

The new arrival looked rather sourly at the conductor. "She says she is going with you. Her brothers told her all the railroadmen are nice people!"

When the conductor's hat settled back on his head he asked, "Why?"

Then the story came out. Life had been rather rough on the farm, with little sympathy wasted on an extra daughter even if she was pretty. So Marie had taken her small savings and walked the ten odd miles to go with the "nice railroadmen" to the end of the line. She thought it might be Quebec, where she would find a job.

The conductor and brakeman, unwilling to see this country flower tossed into the unkind arms of the world, found her a respectable place to live and Marie promptly got work in a hospital.

Naturally there was a happy ending. Marie and the brakeman were married a few months later and at last report were living in Quebec. All because an unhappy country girl had gone bravely down the road to go with "the nice railroad men."

On another line, through the frontier country of Alberta, a conductor at a station which consisted of a wide place in the track protested when a roughly dressed woodsman, speaking no English, thrust a bundle of valuable furs on him and strode away. The conductor took the furs back to the terminal and stored them with a trader who gave him a receipt for them.

The same incident occurred a few weeks later, and in spite of the conductor's growls and gesticulations he found himself with another pack of pelts. He left these with the same trader and kept the receipt.

A short time later the woodsman arrived at the train when it stopped at the tiny station, but this time he climbed aboard with his bundle. The conductor had a passenger who spoke French and English explain to the trapper what had been done with his property. The forester took the receipts and nodded.

"All right. Brass buttons. Government man," the interpreter translated.

The skipper thought this was the last of the deal, but a few days later the native took the train back into the woods and presented the conductor with two pairs of lovely fur mittens, a large pair for himself and a smaller pair patterned for feminine hands.

"Now, I didn't mind doing the trapper a favor," the ORC says when telling this story. "And the mittens were dandy. But how the hell did that guy know I had a wife?"

Before we go out on the line and take a close look at some of the power and see just what the big locomotives haul and where, let's refresh our viewpoint of the Canadian National as an operating railroad of today. After all, any carrier is only as

strong as its credit and capabilities as shown to be by the record.

After the Dominion Government took over the CN segments from the private owners in 1921, the carrier's course was not smooth, even after the hue and cry of the private-enterprise clan died away. From 1931 to 1935 changes took place in the railroad's control, a Royal Commission forcing the replacement of the board of directors by three trustees. Fortunately, a liberal government came into power in 1935, one that favored the practical method of supervision by a board of directors with a president as operating manager. However, even this method of ruling the railroad is subject to some political interference, usually by the more unenlightened factions in the government. To the credit of the men in the CN's executive positions, they have weathered the storms of politics.

Their task is not easy. The CN has considerable mileage which is unnecessary from an economical point of view, but *vital from a national stand-*outland or duplicated lines is low, outland, or duplicated lines is low, and the directors have the difficult task of trying to show a profit on the railroad as a whole, while ducking brickbats of hecklers who argue that CNR has less traffic density than the Canadian Pacific. Another catcall is, "The Canadian Pacific has a better operating ratio. The CN is flopping."

Sure, the CP often outdoes the CN in the cash department, but then the CP was built as a planned, integrated carrier with an eye to revenues. The CN is made up of the fragments of the broken dreams of *entrepreneurs*, and must serve the national interest as well as the profit department.

The Royal Commission stated in 1932, "There developed by the authority of the Parliament of Canada, the tragedy of three transcontinental railways when two were all that was . . . required."

Tragedy? Would the shortsighted Commissioners abolish the towns and trade which the thrusting live arms

TELEGRAPH WIRES become coat hangers for snow shovelers in Saskatchewan, northern Province between Manitoba and Alberta. CNR's Western Region includes all lines west of Fort William and Armstrong, is old Canadian Northern territory

MONTAGE of Canadian National power is work of Bill Robinson, CNR chief photographer. ***At left, top:*** Victoria Bridge, entrance to Montreal. ***Third from top, right:*** the 9000 disguised as a box car for war duties. ***Center:*** The streamlined 6401. Original engine of this series pulled the Royal Train

of the steel trail set in motion? When World War II struck, the arguments of the backward-looking clique were swept away. Canada was grateful for every bit of her busy trackage.

Canada's railway network will improve the day economic progress eases the CP into the CN fold. Unified operation, particularly where the CN and CP duplicate services in an uneconomic way, may save as much as 90 million dollars a year.

Some twin mileage would be united, and present conflicting schedules realigned to the public's benefit. Duplicate systems of accounting, rating, and all the functions of two railroads would be eliminated by unification, and the savings could be used for expansion to Canada's frontiers. The Alcan territory, for instance, could be penetrated.

A complete Canadian network will enable the railroads to give keener competition to trucks and planes, and even allow them to expand their own highway and air services where profitable. Instead of senselessly battling each other for business, the more complete and efficient network will expend the energies now lost on each other in stimulating railroad traffic everywhere.

TODAY the Canadian National moves its largest, and most profitable, tonnage between several separated points—but we must remember that while the Atlantic region looks most important, it is the central area traffic that pays off.

If it is possible to pin down the busiest right-of-way, somewhat difficult on such a huge, diversified network, it probably is the double-tracked Montreal-to-Toronto main line, with the Chicago extension and the Grand Trunk lines. More vital, if less busy in volume, is the eastward line from Montreal to Halifax, Nova Scotia, Canada's outlet to Europe. However, if you ask any of the citizens on the additional 22,000 miles of track, who depend on the CN for their daily needs, undoubtedly they consider their line the most important—and it is, to them. Then, too, there are a number of settlements which have only the twin streaks of iron to connect them with the outside world. Up beyond the Pas, for instance, where telegraph poles have to be three-legged. Here, ordinary poles would be popped out of the frozen tundra by the action of freezing cold, so the tripod rigs are set on the tundra.

Out in the Canadian Rockies the railroad reaches towns which have no decent highways or roads, and all over Canada there are areas which are snow-locked in winter except for the probing iron horse behind the wedge or rotary plows.

The steam power behind these plows is often the best in the world, for although the Diesels, some switchers and the old 9000, have moved into Prince Edward Island, the coal burners are still the kings.

Old 9000 once set records for Diesel operation in North America, for speed and tonnage in cross-continent hauls. During the war the big, box-shaped metal monster received an additional coat of armor plate before she began pulling an armored train about the Pacific coast area, where the Japs were threatening after their landings in the Aleutians.

One roster of power, the engines used on the CV, is simple and clear cut, but the complete list of CNR locomotives includes a wide number of types, as will be seen by referring to the locomotive rosters of this and next month's issue. Among the big boys, the streamlined-jacketed 6400 class (of which the original 6400 was used on the Royal Train) is perhaps one of the most picturesque. The bullet-nosed 6060, and the 6000s, 6020s and 5700s with smoke deflectors, are the most popular with camera fans.

A variety of small locomotives are found in commuter service, with some of the little Southern types still in operation. Out on the line one can

AMERICA'S first heavy-duty road Diesel has had a checkered career. Numbers 9000 and 9001 were originally operated M.U. but when mechanical difficulties proved them unsuited to long, sustained runs the 9000 was assigned to Toronto-Hamilton service. At the outbreak of the War, she was remodeled to power armored supply trains. Her protective plate was shaped to give her an innocuous boxcar appearance from the air, and she operated in and out of Vancouver, B. C., during the dark days when the Aleutian gateway to Canada was vulnerable to Jap attack

still see the engines which came to the CN upon consolidation of the many systems which comprise it—enough variations to keep an engine picture collector happy for months.

The power and rolling stock of the CN receives most of its service and

repairs in Canadian National shops. The installations in Montreal are the most complete railroad repair and rebuilding facilities in the country, and indeed the best railroad construction shops. True, there are locomotive and car building factories in Canada, but the shops of the CN are superior. They have the widest variety of machinery, and the most highly trained men.

This may sound unusual, but actually it is harder to repair all parts of a machine than it is to set up a factory and build a number of machines in one temporary operation. A complete railroad service shop must be

ready for anything, and the CN shopmen are raised under the apprentice system, which turns out experts in many trades.

The shops are continually loaded with repair work, and only lack of space prevents the Canadian National from building its own postwar equipment, and building it better, because of higher grade workmanship, than outside firms can manage to do with their temporary assembly lines set up for the individual order.

The CN shops are turning out new bedroom-buffet-lounge cars which are the last word in comfort; we say new, because these cars are made by tearing down sleepers until nothing is left but the wheels and then replacing the trucks. You may find part of the rebuilt car if you search carefully, but it's hard to do. The metalsmiths and cabinet makers who make and install the fittings in these cars are a

RANGED in their stalls at left, iron horses chaff for the road at Turcot Roundhouse, Montreal, location of System's principal shop, Pointe St. Charles. Including St. Malo, Quebec Province has two important shops; Ontario, three and Winnipeg two

PRESENT General Governor of Canada, Viscount Alexander, framed in the cab window of a locomotive on the New Brunswick lines. Former British Field Commander at Tobruk spent July at CN's Jasper Park Lodge in the Canadian Rockies

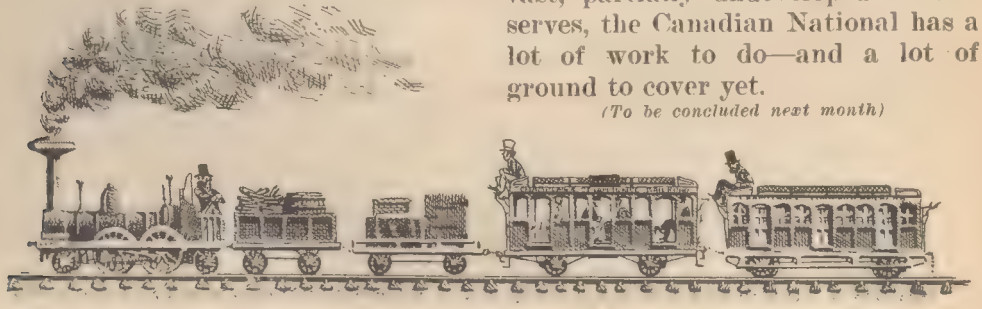
pleasure to watch. They work with the care of craftsmen who know their work and are proud of it, and this pride shows in the carefully matched woods and finely polished parts even where they can't be seen. The paint jobs are checked and rechecked by shop artists. To watch them carefully shade and retouch the maple leaf and heralds, like Rembrandts in overalls, is to understand the craft pride that makes them determined to turn out nothing but the best for their railroad.

The same neatness and care of property is noted out on the line, where CN stations and buildings are far above average in cleanliness and appearance. The makers of red, green, and yellow paints must find the CN a wonderful, steady market. Notable, too, is the number of station and office grounds that run to fine-clipped green lawns and flower-bed centers.

It is this general pride of possession which gives the Canadian National a different appearance even to the casual viewer. And it is noticeable almost everywhere in the natural courtesy and efficiency of officials and employes—natural because it is consistent, without the constant prodding of educational or salesmanship pep talks.

With its expanding plant, and the vast, partially undeveloped area it serves, the Canadian National has a lot of work to do—and a lot of ground to cover yet.

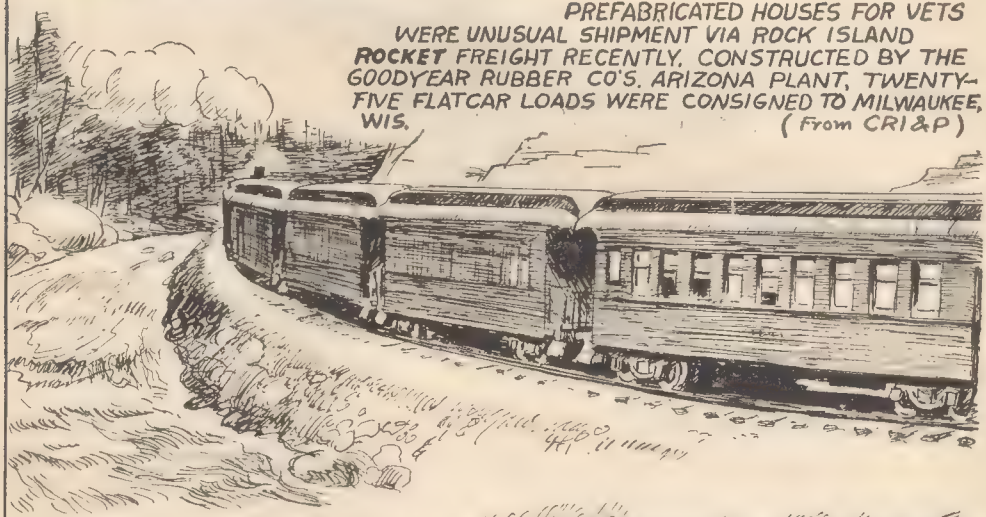
(To be concluded next month)

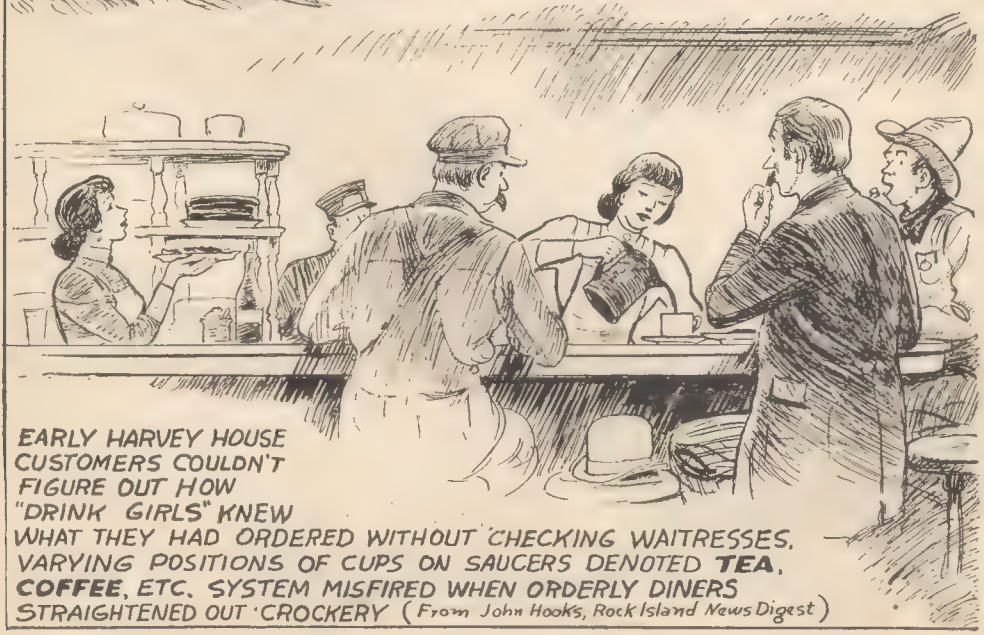


ALONG THE IRON PIKE

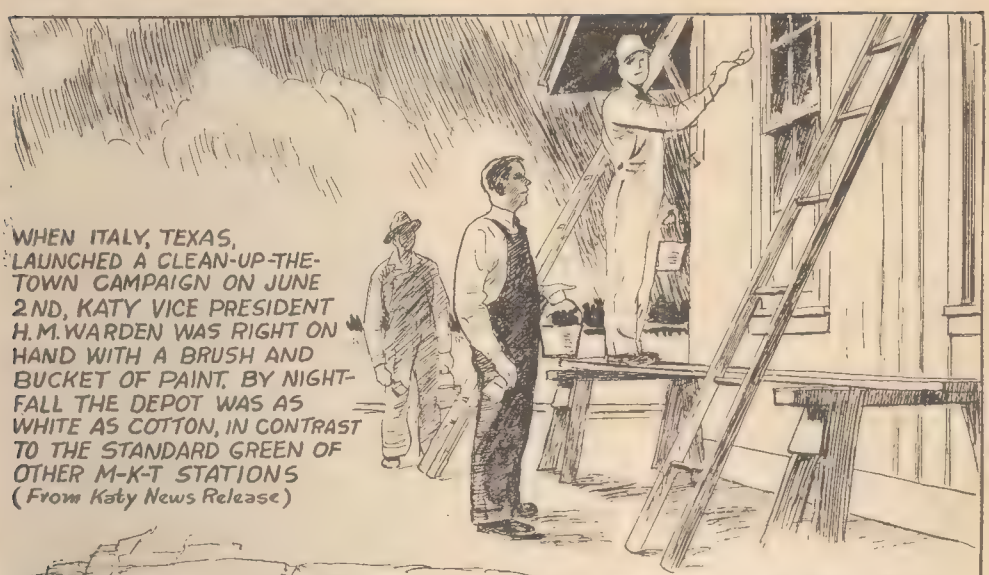
by JOE EASLEY

PREFABRICATED HOUSES FOR VETS WERE UNUSUAL SHIPMENT VIA ROCK ISLAND **ROCKET** FREIGHT RECENTLY. CONSTRUCTED BY THE GOODYEAR RUBBER CO'S. ARIZONA PLANT, TWENTY-FIVE FLATCAR LOADS WERE CONSIGNED TO MILWAUKEE, WIS. (From CRI&P)

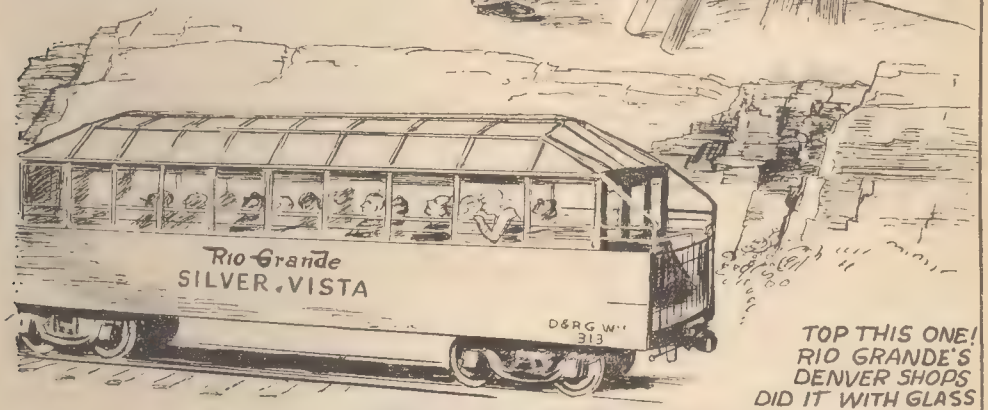




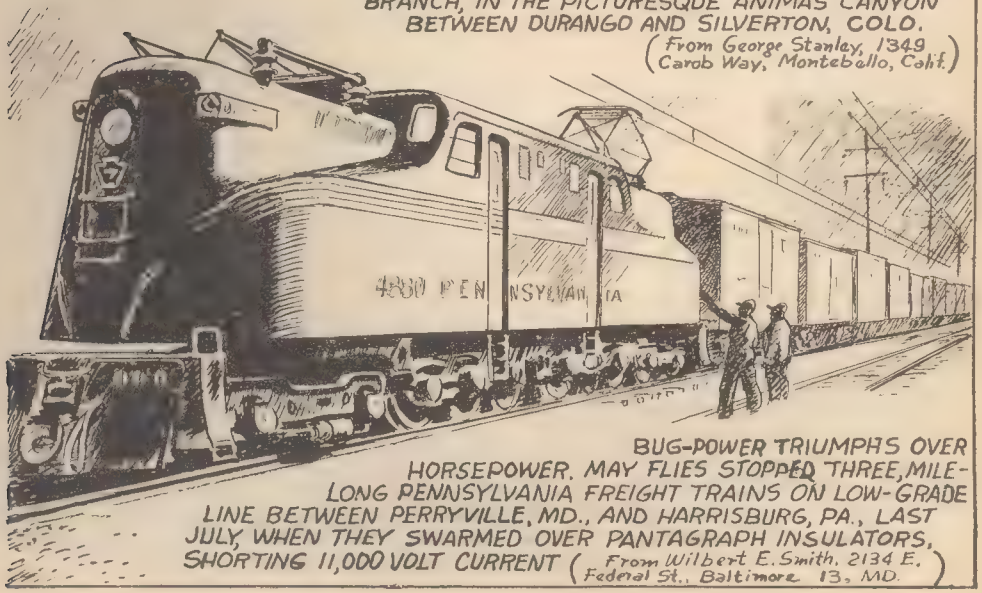
EARLY HARVEY HOUSE CUSTOMERS COULDN'T FIGURE OUT HOW "DRINK GIRLS" KNEW WHAT THEY HAD ORDERED WITHOUT CHECKING WAITRESSES. VARYING POSITIONS OF CUPS ON SAUCERS DENOTED **TEA**, **COFFEE**, ETC. SYSTEM MISFIRED WHEN ORDERLY DINERS STRAIGHTENED OUT CROCKERY (From John Hooks, Rock Island News Digest)



WHEN ITALY, TEXAS, LAUNCHED A CLEAN-UP-THE-TOWN CAMPAIGN ON JUNE 2ND, KATY VICE PRESIDENT H. M. WARDEN WAS RIGHT ON HAND WITH A BRUSH AND BUCKET OF PAINT. BY NIGHT-FALL THE DEPOT WAS AS WHITE AS COTTON, IN CONTRAST TO THE STANDARD GREEN OF OTHER M-K-T STATIONS
(*From Katy News Release*)



TOP THIS ONE! RIO GRANDE'S DENVER SHOPS DID IT WITH GLASS WHEN THEY BUILT THE 313 WITH AN ALL-VISTA-DOME ROOF. IT RUNS ON THE NARROW-GAGE SILVERTON BRANCH, IN THE PICTURESQUE ANIMAS CANYON BETWEEN DURANGO AND SILVERTON, COLO.
(From George Stanley, 1349 Carob Way, Montebello, Calif.)



BUG-POWER TRIUMPHS OVER HORSEPOWER. MAY FLIES STOPPED THREE-MILE-LONG PENNSYLVANIA FREIGHT TRAINS ON LOW-GRADE LINE BETWEEN PERRYVILLE, MD., AND HARRISBURG, PA., LAST JULY, WHEN THEY SWARMED OVER PANTAGRAPH INSULATORS, SHORTING 11,000 VOLT CURRENT (From Wilbert E. Smith, 2134 E. Federal St., Baltimore 13, MD.)

Jawbone

They Said the Universe Had Stalled When the Silver Arrow Stood Still. Which Was Certainly True the Night She Nudged the Rim of Pegleg's Lost Mine

A MILE-LONG freight train stumbled hastily into the passing track and subsided with the grunt of brakeshoes. Then the eastbound *Night Hawk* blazed across the desert like a comet, staining the moonlight with red splashes as she tripped the automatic blocks far in advance. The lonely train-order station at Gravity, hunched under a tall semaphore, sighed and creaked warped old joints. The buzzer above the telegraph instruments, under kerosene lamps, squawked like an old hen caught in a wire fence, warning that the *Night Hawk* was only three minutes away.

Eddie Sand, the night operator,

SHE glowed aloofly, twenty sleek coaches of lavish beauty, as graceful at rest as in full flight

By
HARRY BEDWELL

clipped tissue train orders in two hoops and fastened them to the rack beside the main track. The *Hawk's* headlight raced in over the bulge of the world.

Eddie watched the fireman, leaning from the rocking cab, and then the brakeman in a vestibule doorway, snare the hoops as the passenger train flashed by. She faded at once into the vast solitude.

The freight train lumbered out of the pass and followed.

Eddie put on the headphone. Phantom voices crowded the wire with cryptic jargon as the dispatcher and the train-order operators threaded the swarming traffic along the single track. The high iron was loaded tonight.

"Number 92 by Gravity at 7:57," he intoned.

He read a book with placid concentration, but a veteran boomer is always alert, and he knew when an automobile came stealthily down the rutted road. It didn't show a headlight when it stopped outside.

Yeah, it was Trainmaster Stanley on the prowl, showing up in unexpected places, in his automobile instead of riding the trains, looking for somebody to throw the book at. He stood suddenly in the doorway, trying to surprise the guilty, staring with quick, suspicious eyes.

"Just a smart boomer, always reading a book," he said, but the sneer was shaded enough so you didn't feel compelled to make him eat it.

"Yeah," said Eddie, with as much offensiveness as he could put into a monosyllable.

Stanley believed only lazy people read a book. And it wasted the railroad's time. Besides, he didn't care a bit for boomers. They were incorrigible, and he liked a more hat-in-hand deference. He was a young, wartime promotion, trying to set the railroad on fire, burning himself up to make a record. He needed cooling off and he was down in Eddie's book to get it.

"Conductor Hawkins reports," Stanley stated ominously, "that you stopped the *Sunbeam* here by handing up the wrong set of orders."

"I'll bet he did," Eddie agreed profoundly. "He'd write that one up and make it sizzle."

Going by Gravity at fifty m.p.h., it had taken the *Sunbeam's* engineer fifteen seconds to discover, from the orders snatched from the rack, that the dispatcher had cleared the wrong train. He was well over a mile away before he got his train stopped. Then the air stuck. Eddie mused on the beguiling recollection of old "Scrap Iron" Hawkins, in blue and gold, stepping down from an air-conditioned Pullman and then walking back under the withering desert sun to pick up the proper orders.

"He pawed up the earth," the boomer recalled delightedly.

"Look here!" Stanley's eyes were showing red. "You delayed the *Sunbeam* twenty-two minutes."

"Who says *I* delayed her?" Eddie drawled enough to make it aggravating.

"Hawkins says so," the trainmaster snapped.

"Not an impartial judge," Eddie objected.

Stanley bored in. "Then who did delay her?"

"You're doing the investigating," Eddie pointed out. "My job keeps me busy enough."

When you said it like that, you'd better get set for warfare. Stanley ran a quick eye over him as Eddie unfolded his lean length. The trainmaster had the heavy shoulders of a carhand, and powerful arms. He ought to be able to break the slim boomer in two, and he was tempted to do it.

But the glint of red in the drifter's hair showed like a caution signal: it seemed a little like a smouldering fuse. Stanley spun and went out before the temptation took strong hold of him.

Eddie watched him fog the moonlight with dust as he drove away at a screeching speed. That brass collar looked too hard for trouble in the wrong places. He'd make it tough for the home guards, but he'd better take the far side around the boomers.

The station throbbed with the distant pulse of a Mallet blasting in out of the shimmer, chewing up the barren miles.

Eddie put on the headphone, toed the pedal in the dark under the table and said dispassionately into the transmitter:

"Coming west."

The dispatcher in his comfortable room two hundred miles away, grunted dejectedly into his telephone. You could hear him chewing gum furiously.

He said at last:

"That's Extra 4727 West, and she

ought to go right by your door at a high rate of speed. No more for her."

THE second buzzer would warn him of her near approach. Eddie took up his book. He was a boomer brass pounder from all over the map. Now, in a scholarly mood he was reading up on the history of transportation, from the times of footpaths in the forest and canoes on the streams, to the era of that huge Mallet out there storming at him through the moonlight. He relaxed and read with close attention.

He failed to note that excessive minutes walked off the clock, and still the second buzzer remained mute. He came blinking out of primitive time when the shimmer of a headlight through the bow window reflected on the printed page.

He wheeled in his swivel chair. The freight train was crawling slowly into the passing track.

"That westbound's not going anywhere," he intoned into the transmitter. "She's heading in."

"The hell she is!" the dispatcher blew. "Now what do you suppose happened to that promoted bakehead? He's been dragging his feet all the way. Find out what stopped him."

A mile to the east, the hind end of the freight train cleared the switch and stopped.

Then the engine cut off and chugged up to the station. Bricks McLennon, the engineer, came down the ladder from the high cab. Bricks was round and bulging, and he looked like an amiable spider crawling out of a dark web.

"Eddie," he reported cheerfully, "tell the dispatcher I've got to cut and run for water." He boosted his stub length onto the telegraph table. "I told them before I left Yarbo that they was givin' me too much tonnage." He plucked a cigar from among the dozen that bulged from his blue shirt pocket. "But you're never able to tell a yardmaster much," he explained genially.

"Water, he says," Eddie murmured. "Seems like I heard the DS mumbling about the poor run you were making."

"Yeah." Bricks fouled the office with smoke. "I had to whale hell out of that old Malley," he agreed without resentment. "This side of October, with cottonwood leaves on the rail, she slipped clean down. If a bird had of lit on my cab, it'd stopped me dead," he twinkled. "I ain't got six inches of water left from the beatin' I give her, so I'll have to run light to Mesquite and get some. Tell the dispatcher to give me an order that'll get me back."

Eddie broke in on the tense universe inside the dispatcher's telephone, and reported.

"The DS is sure snowed under." Eddie shook his head. "He says he wants you back here for Number 43 so you can follow her right out, and no foolin'. He's got a fleet of freight trains coming out that he don't want you tangled up with. Extra 3444 West is right behind you. Let her by at Mesquite, then hurry back."

Bricks glanced at his watch and cocked a speculative eye at the boomer.

"He's goin' out on a limb," he reckoned, "bringing me back against Forty-three. Anything happens, she's stuck. And you don't lay out that streak of varnish without their slappin' on a penalty. Ho-kay," he sighed. "It's his railroad. Where's the train order that'll get me back?"

"He says it will delay you too

much for him to line you up," Eddie explained. "He told me to flag you back."

"Wants me to do it on jawbone?" Bricks' eye was slightly skeptical.

"Yeah, that's what he said," Eddie nodded, and let it lay.

You don't urge a hogger to bust the rules. If Bricks' train was hung up here till the fleet arrived, there would be a jam. Sometimes, when the railroad was tight, you moved on verbal instructions and somebody's say-so instead of by train order to save the minutes. But it wasn't in the book. You did it, and something slipped, they'd tack your hide on the roundhouse wall.

Bricks puffed furiously and brooded. He didn't have too much time to make the round trip to Mesquite against the passenger train, and it was asking for trouble to do it on jawbone. But the line was flooded with more traffic than it had been in wartime. Often some slight mischance caused it to stall, and no good railroader likes to be mixed in a jam.

"If Stanley caught me at it," Bricks mused, "he'd start a file that'd eventually grow as big as a book."

"If he's as mad as he was when he left here," Eddie grinned, "he'd light a fire under you."

"Stan was a good kid," Bricks considered. "But young fellers sometimes get all muscled up when they're first promoted." He blew a reflective cloud of poisonous smoke. "If somebody—say a smart boomer—was to shame him bad, show him what a blamed fathead he's making of hisself, mebby it'd steady him so he'd make somethin' of his chances." He gave Eddie an oblique look. "His dad was a blamed good friend of mine," he explained. "Trouble was, he went out when Stan was too young."

"Somebody," said Eddie flatly, "will just naturally bust that dinger all to pieces before he grows much older."

Bricks sighed and got down from the table.

"I guess we'd better not tie up the railroad," he said. "I'll leave it up to you, Eddie, to protect me comin' back."

Eddie hooked the loop of a train order hoop over the two semaphore levers.

"A warning to myself," he explained, "that after the 3444 follows you out, I'm not to give another westward train the board till you get back."

Bricks paused in the doorway, a tubby man with a genial eye and invariable good humor.

"Eddie," he said, and clouded the dusky room, "I been railroadin' thirty-five years, and I know a good railroader when I see one." His amiable eye lit on the boomer's face and held. "Some get panicky and go up in the air. The ones that take it easy and keeps their heads cut in, avoids the bad accidents. I'll bet you've kept out of a lot of trouble in your time."

He went out and climbed into his high cab.

EDDIE grinned. Old Bricks, with his shirt pocket full of noxious weeds, rang like a silver dollar. Some considered him a little wacky. He was—like a fox. He was making the return trip from Mesquite on Eddie's mere word that he'd protect such a movement, and Bricks was slyly reminding him with kind words that he was depending on the boomer to do it.

The marker lights of the lone engine drew together and died far down

the main track. Presently Extra 3444 West, a drag of empty reefers, rocked by.

They'd all been keyed up during the conflict, keen and alert to keep the materiels moving out to where the guns were going all over the map. They'd hung up a record. Now, some of them were dragging their feet. It was a let-down after being strung up too long. Old Bricks was well aware of it. He was going out on a limb, but he had a wary eye for anyone who might fumble.

The silence was like crisp gauze. The moon turned the shadowy reaches to dusty gold, edged with black. Shadows flitted and flowed through the haze. Could be ghosts of desert men—trappers and prospectors, freighters and railroadmen—come from their lonely graves to a meeting in the moonlight. Fremont and Kit Carson had explored here. General Kearney and his ragged battalion had struggled across the desolate miles, with torrid death snapping at their heels, and gone on to defeat at San Pasqual and the conquest of California. The first overland mail stages had made brief ruts through the creosote brush and the spidery ocotillo, then vanished in their own dust. Then the railroad builders bound it with a thin ribbon of steel, and that alone endured.

It was all there in the thick volume lying on the telegraph table, a record of men bent upon building a mighty nation, and the tales the book told had aroused memories of that other time he'd worked here on the desert when he was a kid boomer, wide-eyed and breathless, with the world in his pocket.

He folded into the chair and leafed the front of the book, cruising back in time and space, while the night slipped swiftly into the somber silence; back to the period when the Erie wasn't much longer than a shoestring. Even in those olden times, he noted, the hoggers were afflicted with a stiff neck, the same as modern runners. They wouldn't look back for signals. When a skipper wanted to signal his engineer to stop and have a talk, he tried to attract his attention by shouting and throwing objects at him. But even as now, it seldom drew a glance from the head end. He wondered if any of those old-time captains ever became marksmen with a slingshot, and what happened if he beaned the hogger.

They called a train a "brigade." That was a dilly. He'd bet his next paycheck that if you asked the conductor of Bricks' freight train, hung up here on the siding, what he had in his brigade, it would start a fight.

Down inside of him an alarm went off. He came wheeling out of the remote past into the ominous present. The solemn clock stared down at him, wagging rebuke, pointing grimly at elapsed time. Too many seconds had tripped from that inexorable pendulum since Bricks had gone off to fill his tank with water. The roaring trains took the minutes in long swallows, and you had to be thrifty of time when the high iron was hot. Bricks should have returned ten—twelve minutes ago. Number 43 would hit the buzzer within two minutes, and Bricks wasn't here to let her go.

If you halted that streak of varnish out here in the solitudes, they'd yank all concerned out of service and make them explain. And it had better be a sound reason or they'd never get back. Forty-three was the *Silver Arrow,* the Southwestern's postwar bid for the extra-fare trade—light-

weight, streamlined Pullman standards—and officials scrutinized her every move. She had a blistering schedule, and she had to make it, or the opulent wouldn't ride.

The dispatcher's phone sawed through the quiet. Eddie answered, "Yeah, this is Gravity."

"Hasn't that light engine got back yet?" the dispatcher queried.

"Not yet," Eddie reported.

"Whadda you suppose is holding him up this time?" the DS fumed.

"If Bricks is in trouble," Eddie said, "he'll get himself out of it. That hogger knows his way around this railroad."

"Yeah, I know," the DS fretted. "But Forty-three'll be on your block in a minute, and I wanted him back there for her. The fleet's beginning to move."

Eddie glanced at the order hoop he'd hooked over the semaphore levers. The dispatcher hadn't said that exactly right. He seemed to have forgotten that if Bricks didn't come up for air immediately, he would stop the *Silver Arrow*. Eddie stared into the moonlight to the west. There was no sign of him, no shimmer of headlight or warning block signal.

You could feel the *Silver Arrow's* long lunge across the solemn flats. The moonlight fluttered as if stray desert phantoms were made uneasy by the roaring meteor's approach. They whispered together in alarm. A strong pulse beat in the night.

Bricks was in the kind of trouble that prevented his telephoning from Mesquite, or from any of the blind sidings between, and he hadn't been able to bring his engine back. Bricks played for keeps. He wouldn't touch the *Arrow's* schedule if he could help it. When a train was hung up out there in the dark, and no word of her, you'd imagine the worst had happened—if you let your mind run.

The strident buzzer snarled and a red block flared. He held the headset close to his ear, waiting for a sign of Bricks, set for a quick maneuver if he showed at the last minute, while the *Silver Arrow* streaked up over the rim of the world.

He said, "Number 43 is coming at Gravity."

He got no reply. The dispatcher was "down the hall" for the moment.

The second buzzer yelled that the *Arrow* was coming close. The angry sound would stampede you into doing the wrong thing if you'd let it. He choked it off. This was going to make a great number of very important people unhappy. He turned on his electric hand lantern and went out on the platform.

The headlight probed the empty miles. It ran along the line of freight cars lifeless on the passing track. It sprayed the station with crawling light. He stood beside the main track and waved his lantern slowly back and forth. Not an abrupt washout that might cause the engineer to dynamite the brakes. Just a precautionary signal that he wasn't going to get the board, so he could choke her down and make an easy stop without over-running the station.

You could tell by the two furious blasts of the whistle in answer that the hoghead was running a temperature. It was incredible that any one would check the *Silver Arrow's* flight out here at this dead end of creation. The staccato crack of the stack died. The sullen rumble of running gear, caught in the grip of brakeshoes, rolled across the infinite silence. The line of wheels trickled fire as the *Silver Arrow* checked her long surge across the continent and came to a

smooth stop before the lonely, sun-warped train-order station.

She gleamed and glowed in the moonlight. Her drawing rooms and compartments were luxurious, and her dining car sparkled like a jeweler's show window. The rich and haughty journey on the fabulous *Silver Arrow;* the potentates and the pundits who believe the world would falter if you took ten minutes out of their inflexible schedules.

Time was the essence, but now they were stalled here indefinitely under the rigid arm of the semaphore, stranded in an empty land where time got lost, because of a tubby hog-head who had gone off into the dark and hadn't come back, and a train-order op who'd said he wouldn't let anything go west before he returned.

Eddie suddenly remembered, with an added foreboding, what he had half-overheard on the wire, that there was a party of aristocrats aboard the *Arrow* tonight. This would resound and reverberate.

THE lone Mallet had chuckled a deep belly laugh as Bricks let her out down the main track, pleased that she was rid of the 9000-M's that had been dragging at her hind drawbar.

Bricks joggled on the seatbox like an amiable mold of jelly. He was in tune with the universe, but his placid eye didn't miss a thing. Mercury, Dry Wells and Toby, vacant blind sidings, came under the flare of his headlight and dropped behind. He slowed, coming up to Mesquite, a sprawl of abandoned old buildings and a water tank.

He headed into the westbound passing track and rolled to the farther end where he spotted the tender at the spout. The fireman clambered down and went back to fill the tank.

Bricks ambled across to the deserted station to report to the dispatcher. The telephone was in a box on the outside wall, and he lifted the receiver and listened. He said, "Hello! hello!" and listened more intently. The silence on the wire was uninterrupted. He twisted the crank and yelled into the transmitter. He got no response. The phone was dead. He gave it a resentful look and went back to his engine.

A headlight floated down the branch line that angled off into a distant valley. A long train of dripping reefers hauled in out of the solitude. She headed into the westbound pass and pulled down behind Bricks' engine, the 4727.

Bricks hadn't been warned of a train coming off the branch, and he smelled an incipient jackpot. That Extra 3444 West, coming up behind him had, he knew, a meet with Number 622 here, and that likely meant that the 3444 intended to get in the clear and let the *Arrow* by. If that was so, then the perishable train would have to back out on the branch again and hang there till they cleared a siding for her.

The perishable train crawled down the pass till her engine was within six car-lengths of the 4727. At that point her emergency air exploded and her brakes went on with a wham.

Bricks figured, from the delirious tossing of lanterns down at the rear of the train, that some part of her was on the ground. There was. A young brakeman, in too much of a hurry, had thrown the switch under the caboose before it was across the points. The hind trucks tried to go in two different directions at once and ended by slewing around till the left wheels dropped over the edge of

a concrete culvert. The king pin came out. When the crummy finally quit bucking, the hind end rested on the right wheels and the upper end of the king pin. Until the big hook came and put the caboose together again, the perishable train wouldn't be able to back out on the branch to clear the pass for the 3444.

The conductor stamped across to the telephone. He twisted it, yelled at it, and then gave it a good cussing out because it wouldn't respond.

Number 622, a hundred cars of dead freight, came in from the west and crawled into the eastbound pass, on the other side of the main track. The only empty siding now remaining was the old house track, and it wouldn't hold more than twenty cars.

Bricks observed with growing concern that the block hadn't cleared behind the 622. Another train was coming out of the west. He chewed on his cigar and speculated on who she was and on what rights she was coming in. He didn't have anything on her. There were more unexpected trains showing up here—just where they would do the most harm.

The second eastward proved to be a work train that had been unloading ballast near Slate. She had finished the job, had put a flag on the 622 and was headed for home with a string of empty gondolas. She took to the house track. The siding would barely hold her and the hogger was slow getting into the clear.

Then the 3444 came in cautiously against the work train's block. The engineer choked her down at the east end of the yard. He was supposed to hole up here and let the *Arrow* by, but there was no hole and he was getting close on her time. He let his train drift and tried to figure out what was going on in the choked Mesquite yard. Nothing good, he'd bet.

Percy Grange was on the 3444 that night. He was a temperamental old head, full of moods and resentments. The dispatcher had put him in the hole for a meet at Kiefer and again at Clay Pots. Percy thought he should have held the main track at both places, and to show his hostility he took his time coming out of the sidings. When the DS handed him up a message at Retreat, asking what was delaying him, Percy flared. He wasn't going to run the drivers off his locomotive when the dispatcher kept stabbing him.

He came fuming up to Mesquite. And when he saw that the two passing tracks were already occupied, he blew. He would have to make a good, stiff run to the next siding to clear the *Arrow* without slowing her down. That dispatcher was too blamed smart! Rawhide you right into a jackpot. He'd a mind to drag his feet and hang the *Arrow* up on his tail. But it was only an idea that didn't jell. They really got tough with you if you trifled with their pet schedule.

In his exasperation, Percy failed to note the warning signals that the work train hadn't cleared the main iron. Her engine was inching along on the other side of the station, out of sight. Percy was intent upon discovering where the other fellows had gone wrong. He let her drift and stared about—in the wrong direction.

The pilot of the 3444 nosed into an empty gondola that was crossing the house track switch. The gon rode the pilot, disengaging her forward coupling. She twisted and tipped and slid off the pilot. She turned over across the main track.

Percy set the air, blew out a flag

and lit out for the telephone. He twisted the crank, yelled at it and swore in hopeless rage.

Train and engine crews straggled in and assembled on the station platform. They wrangled. Now and then one of them would try the phone, hoping to get into communication with the dispatcher so he could untangle them. The *Silver Arrow* was now due. She'd come down against the block and a flagman and find she couldn't go anywhere from here. That prospect gave them all the jitters.

Elmer Bobbin, the hogger on Number 622, rode Percy Grange hard for tieing up the works.

"I seen you," Elmer stated bitterly, "standing up on your cab window, your eyes sticking out of your head a' inch, trying to catch somebody else in trouble so you could bellyache to the trainmaster. If you'd kept your eyes down the main iron, you'd seen it wasn't clear."

Elmer slapped an acid spit at the warped platform.

"You had a meet with us here," he continued to burn, "so whyn't you stay up there at the top end of the yard till you added up the score?"

Elmer was thin and waspish and quick on the trigger. He'd fight or run a footrace if you crowded him just so much.

"Yeah," Percy Grange sulked, "you come into a stuffed yard like this, not havin' anything on a work train, and what do you expect? Where'd she come from, anyway? How come that lame-brained delayer let us get tangled up like this?" he continued his querulous questions.

Percy was angular and hollow-cheeked. He wore a disconsolate mustache and an irascible look in his eye. He talked mostly of how his ulcers were acting up, and the dirty run the DS was giving him.

"That ain't the p'int," Elmer nailed him. "If you'da stayed out till you discovered what was going on, we coulda sawed out of this."

Elmer sniffed and strangled on a drift of cigar smoke.

"That you, Bricks?" he asked without looking around. "You on that light engine?"

"Yeah," Bricks nodded. "I brought her down to give her a drink. I got to get back to Gravity to let the *Arrow* out."

"You ain't going nowhere," said Elmer irritably. "The branch is blocked by a derailed crummy and the main line in fouled by an upside-down gon. With the dispatcher's telephone out, this railroad has come to a complete stand till we get it back in and fetch the big hook to clean up."

"You can pull through the east pass, Elmer," Bricks pointed out reasonably, "and they can use it as the main line till they get this mess cleaned up."

"Yeah, but I can't go against the *Arrow*," Elmer snorted.

Bricks beamed and clouded the moonlight wtih cigar smoke.

"I got right over the *Arrow* back to Gravity," he said. "You can take your train in on my rights and I can back through the pass and follow you

in. That'll let the *Arrow* come on in."

Elmer looked at him sharply. "You ain't got right over the *Arrow* with a light engine," he scoffed. "They don't ever give you anything on her but hell if you don't clear her by ten minuts. Lemme see the order that'll take you in."

Bricks puffed gently once. "I ain't got a train order on it," he said placidly. "The operator is flaggin' me back."

Elmer shook his head, quick and decisive. "I'm not going against the *Arrow* on jawbone." He laid it down flat and bowed his neck.

A PAIR of lanterns dropped from the side of the *Silver Arrow*. One went back to flag, the other headed resolutely toward the station.

That high priority party aboard bothered the back of Eddie's mind. He wished he had paid more heed to what had been said on the dispatcher's wire. It seemed to him now they had been somewhat secretive about it.

In wartime they had been tight-mouthed about all operations. Some had been so top-secret you didn't think about them to yourself, afraid you'd talk in your sleep. But you'd think all that hush-hush was over now. Maybe some foreign delegation. They were often mysterious in their movements, and they sent their complaint to Washington, from whence it bounced back in a dire rebuke that officials handled like a hot potato. That, together with what the ordinary autocrats aboard the *Arrow* would have to say about being delayed in this God-forsaken spot, would add up to an extraordinary amount of hell that was sure to be raised.

Eddie sighed regretfully. There would immediately be some very unhappy brass collars on his neck, and no matter what he said or how he said it, nobody would treat his remarks with kindness. He took a last long look down the main track, hoping for a trace of Bricks. There wasn't a trace. At that moment he could cheerfully have strangled the tubby hogger, except that he was well aware that it wasn't Brick's fault. He didn't railroad that way.

He went back to his chair and harnessed himself to the dispatcher's wire. He said quietly into the transmitter, "That light engine hasn't shown up yet." He paused to let that register. Then he added, "Number 43 arrived at 9.26."

"Whadda you mean—arrived?" the dispatcher grumbled.

"Arrived," Eddie repeated. "She's standing here now."

The DS put his mind on that and barked, "Well, what happened?"

"The 4727's holding her up," Eddie explained patiently. "You told me to flag her back from Mesquite against everything except the 3444."

"I told you—*what?*" The dispatcher's voice went up and out of control.

Making a move on jawbone was always chancy. If it didn't turn out right, anybody involved could step back and say he hadn't said it. Or he didn't remember it that way.

Eddie went over it again. "We agreed to flag the light engine back," he said slowly, "because you didn't have time to issue her the order, and you wanted her train out of here ahead of the fleet."

The dispatcher protested, "You got me wrong." He pondered, searching his tired mind for details of the brief transaction that had sent Bricks on a round trip to Mesquite. "I wouldn't

put out anything against the *Arrow.* Specially tonight."

Maybe he honestly didn't remember. It had been a quick shift at a time when he was crowded with orders and reports. He'd shoved the problem of sending the 4727 to Mesquite along in short seconds. Maybe he'd said it out of a dim corner of his mind and couldn't recall his words.

"Anyhow," Eddie sighed, "we're stuck with it."

The dispatcher rang Mesquite, holding the selector button down. "I wonder why somebody there hasn't called me," he muttered. "There ought to be two or three other trains at Mesquite by now." He rang again, then said dully, "I'll have to talk to the chief."

The conductor of the *Silver Arrow* was breathing down Eddie's neck. He turned irritably in his screeching chair. To add to the grimness of the occasion, the skipper would have to be Scrap Iron Hawkins. Eddie bristled.

Eddie and Scrap Iron had formed a mutual and violent dislike of each other ever since their first encounter —the one Trainmaster Stanley had been investigating. That had developed into a brawl which had resounded to the brassy sky. There had been others, more recent, and just as heated. It seemed that fate was taking every opportunity to bring them into violent conflict.

Eddie considered Scrap Iron a brass-bound old he-wasp, and you could fry an egg on what the skipper thought of the boomer. Now that Eddie had again pulled him up at this dreary dot in the vast desolation, Scrap Iron was all prepared to repeat his worst opinions of him, and add more lurid ones to them. They glared at each other.

"I thought they'd run you off the property," Scrap Iron sizzled.

"It isn't your fault they haven't," Eddie grunted.

"I'm going to ask the superintendent," the skipper burned, "to build a sho-fly around this station so we can detour it when you're on duty. What're you holding us for?"

"Oh, relax," Eddie advised drearily. "You put a big-O in a blue uniform all spangled with gold, and he thinks he's bought a large chunk of the railroad."

"Relax!" The explosion made the lamps smoke. "You've got the *Silver Arrow* standing still, and the kind of people who ride that train get impatient fast and do something about it. What in hell did you stop us for?"

Eddie's explanation edged his temperature toward the top of the glass. "You stabbing us while a freight engine goes for a drink?" he yelled in horror. "What's become of her?"

"Seems like," Eddie told him disagreeably, "she got lost over there in the dark. Anyhow, we haven't heard a word of her since she left here."

"Somebody's gone crazy with the heat," the skipper boiled, "and it's got to be you. Give me that phone. I want to talk to the dispatcher."

"Take it easy," Eddie warned. "You're just the skipper of a passenger train. I'm running this job."

"Listen!" Scrap Iron nearly blew the roof off, then choked up on all the things he wanted to say.

"Just take a seat," Eddie advised, "and remember your heart isn't as sound as it once was."

There may have been some cheerful malice in his tone. It wasn't a happy situation, but you couldn't help enjoying Scrap Iron's utter frustration.

The chief dispatcher came on the

wire and he was curt. His questions rattled like buckshot.

"Rayburn tells me you have the *Arrow* stopped," he shot, "flagging a light engine back from Mesquite."

"That's right," Eddie murmured.

"Are you doing this on your own authority," the chief inquired, "or did Rayburn tell you to?"

"As I understood it at the time," Eddie answered, "he ordered me to do it."

"Then how come you didn't also flag the 3444?" the chief bored in. "You let her in behind the 4727."

"Yeah," Eddie agreed. "That was arranged for at the time."

"All on jawbone?"

"All," said Eddie, "on jawbone."

"Are you sure you weren't to hold the 3444 for him as well?" the chief demanded. "If Bricks understood that you were, he may be tangled up with her down around Mesquite."

"Bricks knew she was coming in behind him," Eddie insisted.

"I don't believe," the chief said in the thin voice of suspicion, "that Bricks understood he was to come back against the *Arrow* if he couldn't make it without delaying her. He isn't in trouble or we would have heard from him. Right now he is at Mesquite, waiting for the *Arrow* to pass."

"He's in trouble," Eddie asserted, "and you'll hear from him."

"That desert sun," the chief fumed, "has got inside your head."

The chief would crowd you hard when he was trying to avoid a tie-up, and he could think like chain lightning. He had to. Often a dozen breakdowns and mishaps on the three hundred miles of main track were spilled onto his desk and yammered at him all at the same time. He had to shoot them down like he'd clip a flock of pigeons on the wing.

Yeah, he had all the authority needed to do his job, and in a tight spot he'd crowd you. Within a few minutes some top officials would be riding him hard to move the *Arrow*. She was their lavish bid for high-paying traffic, and she'd have to maintain a record for being punctual or the tycoons wouldn't ride. They'd be abrupt with anybody who tampered with her now. The chief was in a hot spot. And he was crowding.

"In so many words," Eddie said softly, "you want me to let the *Arrow* go."

"Certainly!" the chief bounced. "And right now."

Eddie said, "You can go on from the way it stands as of now. The *Arrow* sits here till we hear from Bricks."

"I'll have a trainmaster at your station right away," the chief snapped back.

"And I'll bet I know which one it'll be," Eddie murmured.

The trick dispatcher began ringing Mesquite again.

IT WOULD come to a boil at division headquarters now. There'd be telephone calls flashing across the chief's switchboard, to officials at home, or at the theatre or in bed. The passenger traffic manager would come out fighting for the *Silver Arrow*. She was his baby. Get an operating official out there immediately to turn her loose. If you spoiled her record, if she got a bad name, they'd as well pull her off. And with that party of foreign caliphs aboard, Washington would certainly probe for subversive elements among the hired help. Take that train-order operator into custody and make him stand trial.

They'd quickly find the trainmaster assigned to this district. They'd load him with dynamite and send him to Gravity, prepared to blast. And this particular one would be highly gratified to do it.

This was certainly going to be one of those nights.

The *Silver Arrow* wasn't disturbed by all the strident effort to send her on her way. She glowed aloofly, twenty sleek coaches of lavish beauty, as graceful at rest as she was in full flight.

Passengers swarmed down from the Pullmans, protesting with suitable remarks. Then they looked at the inscrutable reaches of shadow and dusty gold, and their voices were hushed. They spread out in groups.

A woman outside the bow window said, "Isn't it breathless!"

A man replied, "Rather! My word, those shadows seem alive!"

Scrap Iron muttered, "Wait till they wake up in the morning and find they're late. They'll go scalping then."

"Bumble" Carson and his hind brakeman had come in, and were jawing with Scrap Iron. Bumble was skipper of Extra 4727 West, his train tied up on the passing track awaiting the return of Bricks with their engine. They stared at Eddie glumly when he turned in his screeching chair.

Scrap Iron glowered. "You've sure got us all in a mess." He shuffled his feet angrily. "You still going to hold us here?"

Eddie nodded.

Bumble Carson had a voice like talking down a rain barrel.

"You sure Bricks understood he was to come back against the *Arrow?*" he grumbled.

The repetition of that question could sour you. Eddie cocked a bleak eye at Bumble. He was big and paunchy, not nearly as agile as he used to be. He had walked the mile from his crummy down there at the east end of the pass under protest, and now his feet hurt.

Eddie framed a fine, contemptuous reply, then decided against any more altercations than were already pending.

He nodded.

"You just going to set there and let the railroad come to a complete breakdown?" Bumble bawled.

Eddie nodded again.

Bumble gave him a withering look. He squeezed himself into an old office chair, breathing hard. He took off a shoe and shook fine gravel from it.

"Damn!" he said. "We should have given this country back to the Indians long ago."

Kirk Meadows, the *Silver Arrow's* engineer, lounged in the doorway. Kirk was tall and straight. He had a lean, dark face and his black eyes were quick and observing. If he had run a temperature when he saw Eddie's signal to stop, it was now back to a cool normal.

"Nice place you've got here, Eddie," he remarked.

"Yeah," Eddie agreed, "it was, up till a while ago."

"If you think we're going to be tied up here long enough," Kirk considered agreeably, "maybe I'll buy a lot and build. Got anything to offer?"

"You know how land has gone up," Eddie reflected. "How about selling you that corner business lot?" He nodded at a hundred miles of empty desert.

"No," Kirk declined. "I want to build me a home where the buffalo roam."

Scrap Iron snorted, and Bumble muttered in his double chin.

Kirk glinted them a look.

"Did you get lonesome for company, Eddie, and stop us for a little party?" he asked. "If so, where are the refreshments?"

"The water cooler is over there in the corner," Eddie indicated hospitably.

Kirk grinned, and Eddie explained the situation as it stood at the moment.

"I'll bet you a month's pay," Scrap Iron vociferated, "that Bricks is in the clear at Mesquite, waiting for us to go by."

"There've been several ops," Bumble croaked, "that they've had to pull in off this desert because the mirages got to flickering in their minds."

"Time doesn't stand still," Kirk reflected soberly, "and one way or another, the *Arrow* has to make her run."

"Not till we hear from Bricks," Eddie laid it down again.

Reiteration could wear you down like water dripping on stone. The feeling was growing by the minute that Eddie had slipped badly. Nerves tightened and men grew impatient when the hotshots stood still while time stole away into an irretrievable past. It couldn't endure for long. Something would snap.

Bricks knew as well as any how important it was to keep the *Arrow* on her schedule. You couldn't imagine why they hadn't had word of him, no matter what had happened to the 4727. If you thought about it too much, you might convince yourself that all these others were right, that Bricks had understood he wasn't to return if he were delayed and got on the *Arrow's* time.

He glanced at the hoop draped over the semaphore levers and one of Bricks' characteristics popped into his mind. Roaring by at night, he would always turn on the light above his head to show the op on duty that it was all okay in the cab. A good many hoggers didn't bother to perform that slight task. But Bricks didn't overlook the items that counted.

Now he was in trouble somewhere out of reach. He couldn't even hit the telephone. Whatever move he'd be able to make, he'd do it with the assurance that Eddie was holding all trains west till he was able to come up for air.

Eddie nodded to himself with confidence.

The dispatcher was moving the fleet of freight trains out of Yarbo. His voice was tight and jaded as he issued their running orders. He cleared First and Second 631 and then rang Gravity.

The chief came on the wire when Eddie answered.

"There is a party of distinguished people aboard the *Arrow,*" he said crisply, "whom we are extremely anxious not to delay. It means a great deal to the Southwestern and you are not cooperating."

"That," said Eddie, "is just one way of looking at it."

"Very well," the chief moved on briskly. "I have started a lineman on his track motor to Mesquite to check the telephone there and to report what is going on. I caught the trainmaster at October and he will be at Gravity shortly." He paused, and bore down, "When he arrives, he will take charge."

Eddie eyed the transmitter coldly.

"Yeah," Eddie said. "I know he'll try to."

"You understand," the chief

snapped, "that there will be an immediate and thorough investigation of the whole affair."

"Yeah," Eddie nodded at the transmitter, "I expect there will."

THE indistinct mumble of many voices drifted in the moonlight outside and the sound of wellbred laughter. Passengers swarmed along the line of Pullmans and wandered away, exploring.

Trainmaster Stanley came down the old desert road in a cloud of dust that obscured the moon. He wheeled in beside the station on sliding tires. He nodded curtly to the men's greeting.

"Okay, Eddie," he said ominously, "let the *Arrow* go."

Eddie gave him a cagey eye. They'd sent the trainmaster to Gravity with orders to shake the *Arrow* loose the instant he got there. Any resistance he encountered would only add to his renown, and he was out to make a record. Besides which, he didn't care a bit for boomers who read a book. He'd be delighted to succumb to the temptation to break the slim drifter in two.

"I'll let the *Arrow* go," Eddie said softly, "when Bricks shows up, but not till he does."

Stanley flushed. He made a sharp gesture and stepped to the table. "I'll take charge here," he ordered. "Get out of that chair."

"If you want to get rough," Eddie said flatly, "start in any time you think you ought to. It'll be just dandy with me."

"Heave him out!" Scrap Iron cried joyfully. "And let me help you!"

Eddie stood up. He relaxed, ready to fall into the wrestler's crouch that his old pal Walley Sterling had taught and trained him in so rigorously.

His blood was singing loudly. He would be delighted to break Scrap Iron in two in a number of places. Stanley would be tougher to handle, but he'd not get far with a trick hold on him.

Men were breathing audibly. The glint of red in the boomer's hair showed like a caution signal. The trainmaster paused.

"I've got just one order," he said harshly. "That is to get the *Arrow* cleared from here at once, and I'll do whatever I must to get it done." He glanced at the faces in the dim room. "You men will witness that I've given Eddie one more chance before I have to do it myself."

He moved closer, his hands out ready to grab or to close into a fist.

"The only way to clear a train," Eddie laid it down gently, "is by the book. A trainmaster knows the rules, but I'll remind you of this one." He pointed a finger. "It says particularly that nobody but the op on duty handles the orders and the train-order signal. The book bears down on that one."

"You're always reading a book," Stanley sneered.

He reached for Eddie. He had a lot of muscle and he was light on his feet—a good rough-and-tumble fighter.

His hand darted out and closed, but Eddie wasn't there. The boomer slid along the table like a shadow and

out into the room. Scrap Iron yelped and crowded in.

Then the dusky room was quiet, except for some hard breathing and the sleepy chatter of the telegraph instruments. Stanley blinked and set himself for a rush.

Eddie beamed him a frigid look, but what he saw was the memory of Bricks, standing in the doorway, puffing smoke like a chimney. He was a cordial guy who never feuded. He had a good understanding of locomotives and of how to avoid accidents. He said you did it by taking it easy and keeping your head cut in.

"That rule," Eddie persisted quietly, "goes so far as to say that the op coming on duty, relieving another op, must not handle the orders or the signal until a transfer is made and signed by both. They're particular about clearing trains."

Somebody broke into a sharp laugh, and Stanley exploded. He came in swinging, and then a vise took hold of him. He froze and twisted and his feet left the floor. He blurred and cart-wheeled in the yellow lamplight.

At the short end of the last second, Eddie eased the trainmaster's fall. You slam a man down hard who didn't know how to take it and you'd break some bones. Something Bricks had said, the remark that Stan had been a good kid, made him ease a little in that last flick of time.

Stanley lay in the shadows, dazed and fighting for breath. The fall had been hard enough. He had no faint idea how it had happened. He'd never before encountered the half-nelson and the crotch hold. He panted and tried to realize how badly he was hurt.

Scrap Iron opened his mouth and left it that way.

Voices outside drifted in the sudden quiet. A muffled colloquy began by the open window. A man came to the doorway, and a woman stood close behind him.

"I say," the man said cheerfully, "can anyone tell us where we are, and something about this extraordinary country? It's quite fascinating, and it must have a lurid history."

His dark eyes held a faint twinkle, but they were a little too level. The set of his lean jaw was too firm. The war had put its mark upon him.

Not a bad guy, for an Englishman. You expected the aristocrats to tear the shingles off the roof if you took a piece out of their agenda. This one was enjoying it and asking for more. He glanced congenially at the men in the dim light.

Eddie went back to the telegraph table.

Train and enginemen stared back at the man resentfully. They'd heard that English accent clowned, and they figured he was bogus. With those clothes, he was likely a Hollywood actor. Didn't he know the *Silver Arrow* was standing still, which amounted to about the same as if the universe had been stalled? The brakeman scowled and Bumble snorted. But Scrap Iron gulped for air. He made gestures and burbled.

The Englishman frowned slightly, and glanced at Eddie.

"Perhaps you chaps are bored with it," he said, "but it is quite exciting to us. You might explain it to a stranger within your gates," he suggested.

Englishmen are born travelers, not superficial tourists, and they cultivate the art intelligently. This one wasn't spurious, Eddie considered, and after all, was a kind of boomer himself, always going on for a look

over the next hill. Anyhow, it was all right to give the customer a break.

"I can tell you," he offered, "that the story of this desert country is brief and brutal."

He walked to the door and they went outside.

"Decent of you," the Englishman murmured. "My name's Beaton-Conway, and I'd like you to meet my wife. We're on a bit of a honeymoon."

The bride was dark and grave and likely quite charming. A dozen or so men and women were gathered about them.

"Friends of ours," Beaton-Conway included them all in the introduction. "Now tell us the most brutal part."

Facing an unexpected audience stiffened his tongue. It stumbled a little at first as he stood on the step, recalling sanguinary history. He caught the scent of exquisite perfumes as he pursued Kearney's ragged batallion over blistering trails. The elegant odor of expensive cigar smoke eddied in the dust of the mail stages rocking through the creosote brush and among the smells of grader camps, and brought him a sharp recollection of the pernicious weeds that Bricks preferred.

Passengers loitering through the moonlight came in groups, drawn by the magnet of a crowd. An alert young man leaned against the station and scribbled on a wad of yellow paper. They murmured polite, but subdued interest when Eddie ran out of pioneer heroes.

Yeah, but that stuff didn't really take hold of the plutocrats. His tongue limbered to the tales of Spanish gold. Records of millions paid the treasury of Spain, a fifth of the findings. The man lived who had found bars of gold washed from a river bank over there in the mountains. And all that wealth had come from mines hidden somewhere over the rim of this savage country, lost since the Spaniards had been compelled to abandon them.

All movement ceased in the crowd and you could see the shine of their eyes as he speculated on what dim century and from what recess in the jagged mountains all this treasure had been dug by Indians under the lash. The alert young man now scribbled furiously.

Beaton-Conway was holding his bride's hand, and they both stared up at the boomer enthralled. The last of the parties straying in the moonlight joined the throng. There were four hundred passengers aboard the *Arrow* and all but the decrepit were now present. The opulent liked to hear of ancient Spanish gold.

Scrap Iron mumbled in the room behind him. "That Englishman has one whole Pullman reserved for himself and party. He's got hired help in uniform, and his cook prepares their meals in the diner's kitchen."

DIM memories stirred and came in swiftly out of the moonlight. He remembered that time when he'd worked here before, a wide-eyed kid boomer brasspounder wandering through a world of enchantment, and the old prospectors who used to plod in out of the mirage with their burros, to fill their tough hides and their canteens at the water barrels. The smoke and fine smells of their campfires drifted across his face as he recalled those gaudy nights and the old desert rats who had stuffed the breathless kid with tales of phantom gold and legends of the lost Pegleg Mine.

He took a slow dive into those younger years and careless days.

Pegleg Smith, fur trapper and horse-trader—when he wasn't dealing in the animals in more obscure ways—found fabulous gold somewhere in those dark ridges lying against the dull-growing horizon. And lost it again. Men had spent a lifetime searching for that untold wealth. Men had endured the hell of thirst and sandstorms; had died suddenly or in prolonged agony. And never found it.

The husky drawl of the old prospectors' voices came from the gully over there where they always camped out of the wind. Their words glowed in his mind and spilled into the moonlight in glittering phrases.

Over there around Superstition Mountain, some said it was. Others claimed it was away back in the Carrizos. But somewhere in that dark bulge in the moon-haze, it still existed. On top of one of three black buttes in a line, the ground was covered with nuggets as big as walnuts, black as ink. You could shovel up a wagonload within an hour.

Potentates and pundits came easily under the spell of phantom gold. Some choked because they breathed too lightly, straining to catch every word. A sigh like a quick wind ran among the rich and haughty as he finished the legend of the Pegleg Mine.

Beaton-Conway came back reluctantly from the illusive regions of lost mines.

"And did he really have a pegleg?" he asked breathlessly. "Like Long John Silver?"

"In a fight," Eddie assured him, "he'd unstrap it and use it to beat his adversary over the head."

"My w o r d!" Beaton-Conway breathed deeply. "You're not pulling *my* leg, are you? No, of course not. This is magnificent!" He studied Eddie intently. "Do you know, someone must find that bonanza sometime. Brides are expensive," he grinned, "and I could use a wagonload of gold at this point. I might have a go at it myself," he mused. "Right over there, you say?"

He sighed and shook his head.

"This has been terribly decent of you," he said cheerfully. "And I'm going to take the trouble to write your people and tell them so." He shook hands. "Don't be surprised if I show up later, all outfitted for a try at those black nuggets."

A man in some sort of uniform came through the thinning crowd and handed him a package. Beaton-Conway passed it on to Eddie.

"Try that on your taster some time," he invited, and moved away chattering to his wife.

"Brother," said the alert young man, "you've given me the first break I've had out of this long and lousy trip, all the way from New York. I'm a newspaper man, and that," he indicated Beaton-Conway, "is royalty, on a honeymoon and a mission at the same time, and till you came into the picture they hadn't made as much copy as a hog-calling contest."

He wrote and chattered at the same time.

"I don't know if you were telling the prince bedtime stories," he said, "but you get the morning papers—any of 'em—and see if I don't splash the front page with the tales you told that boy."

He stopped s c r i b b l i n g and dreamed.

"In an unusual gesture of warm hospitality," he composed out loud, "the Southwestern checked the flight

of its crack *Silver Arrow* at a pinpoint station on the vast desert so that a prince royal of England, on his honeymoon, could hear the tales that desert men tell of the gold of the Conquistadores and the phantom gold of lost mines."

He slanted a look at Eddie.

"It'll run a column and a half like that," he grinned, "and your railroad is going to like every bit of it. Give me your name and official title so I can tie you in with it. It ought to make your people happy to see you chumming with the prince, and I'll bet when the officials read the letter he'll write about you, they'll move you up topside."

The plutocrats wouldn't complain when they learned from their newspapers that they had been delayed by royalty. They'd brag about it, and ride the *Silver Arrow* next time.

Someone in the room behind him

THEIR words glowed in his mind and spilled into the moonlight in glittering phrases

was breathing hard. Likely old Scrap Iron choking to death . . . Bricks believed boomers were smart. Haw! . . . Bricks had been a friend of Stanley's dad, and the oldtimers were mighty loyal in their friendships. Old Bricks would like to see the boy do well.

The alert young man was looking at him expectantly, his pencil poised.

"Oh, the name." Eddie came back with a bump. "Put it down, Trainmaster Stanley."

In the room behind, someone dropped something on the floor, and the front legs of a chair came down hard. Somebody muttered mystified profanity.

"Stanley!" exclaimed the newshawk. "That ought to be good for a Stanley-and-Livingston angle." His eyes wandered to the package Beaton-Conway had given Eddie. "I'll bet that's the best Scotch you ever put down the hatch," he muttered enviously.

Eddie offered him the package. "It gets too hot here to handle firewater," he explained. "It'll help you write your story."

"Look," said the newspaperman, "if I could come up with a fella like you just once or twice a year, it would make some of those fairy tales you tell come true. Thanks like the dickens, Mr. Stanley, and I'll do as much for you if you ever come to New York."

Eddie turned back into the station.

"I don't get that," Stanley muttered at him. He was still badly mussed up, and surly about it. "What did you use my name for? Are you trying to hang something on me?"

The distant blast of a Mallet shivered up through the floor. A strong pulse beat across the shimmering flats, and then the bull voice of her whistle boomed in the quiet. The aurora of her headlight flared up over the bulge of the earth. A red block splashed against the vague stars and the raucous squawk of the buzzer sawed into the stillness. Eddie choked it off.

"That," he said, "ought to be Bricks, coming up for air."

Stanley gave him a groggy stare. "I don't know what's going on around here," he complained. "What did you put my name in the paper for?" he demanded.

"Look!" Eddie snapped. "When the brass collars read that newspaper story, with your name linked up with the prince, and then they get his letter, which they'll think is written about you, they're going to think you are a very bright boy. You're not, so don't swell up and act like you thought so too, because if you do, I'll see they find out it was a couple of other guys that pulled this mishap out of the fire."

Stanley ran that through his faltering mind and got a glimmer.

"You mean you're trying to give me the best of it?" he asked.

"Yeah, but not because I think kindly of you," Eddie scorched him. "Bricks says he was a friend of your dad's—a good man that Bricks hoped you'd some day be worthy of."

The Mallet's whistle sounded at the mileboard, and they all trooped outside. Her headlight swung out of a curve and blazed down the main track.

"That's not a light engine backing up," Kirk Meadows pointed out. "She's a hundred-car freight train."

She slowed, coming up to the yard, but ran by the passing track switch. The beat of her stack died as she came up to the house track, then began again as she headed in.

"What's she heading into that short siding for?" the trainmaster asked. "The house track won't hold her."

The deep, deliberate slam of the Mallet's stack flowed across the empty reaches of shadow and dusty gold and made your pulse throb. A black funnel of smoke lifted high against the dim sky. Passengers from the gleaming *Arrow,* knotted in groups, watched her in silence.

The engine crept through the siding and stopped at the east end with a sizzle of compressed air. Most of the train still hung out on the main.

"There've been some crazy maneuvers around here tonight," the trainmaster muttered, "but this looks like the most delirious of them all." He took off headlong for the engine —then stopped suddenly in his tracks.

"Here we go again!" Bumble yelled.

A trainman's lantern, down by the west switch, flashed a back-up signal. The train came apart at that point and the rear section backed off. It appeared to maneuver without motive power, but it followed the directions of the brakeman's lantern promptly. The string of cars stopped when he signalled again. Then when he gave the come-ahead sign, the string headed into the passing track on top of Bumble's train.

"Nice job of switching—but what the hell for?" Scrap Iron snorted.

"This railroad," Bumble remarked plaintively, "is sure on a wing-ding tonight. I wonder what's become of Bricks?" he worried. "This might turn out bad."

THE cluster of lanterns by the old Mesquite station made restless, diamond points in the moonlight. The men shifted their feet and settled solidly on spraddled legs, or hunkered down against the station wall, prepared to enjoy the altercation between Bricks and Elmer Bobbin.

Elmer said peevishly, "You know blamed well, Bricks, that we're in a bad jackpot, and the only safe thing to do is to wait it out. They'll finally send in for us."

"Yeah," said Bricks, "but that'll tie up the railroad for too long. If you don't want to go to Gravity against the *Arrow* on my rights," he suggested, "let me take your train in."

"Not on your life!" Elmer rejected him scornfully. "Turning my engine over to you don't relieve me of my responsibility."

"You'd be safe, goin' on what I've got," Bricks edged in his voice hard and wary.

"I don't see you got anything to go on," Elmer cried. "We took chances in wartime with green help that didn't know a dwarf switch from a marker, and often we went on jawbone because we had to move the men and the guns to where they'd do the most good. We come out all right because the old heads had the savvy to keep new ones lined up. But the war's over, and you can't keep going out on a limb and not have it break off. There ain't that much luck on this railroad."

Bricks didn't seem to have heard him.

"There's room enough at Gravity for you to clear your train," he figured. "My train's on the east end of the pass. That leaves enough siding for more'n half of your cars. You could head into the house track, and we'd cut off what it wouldn't hold. Then I'd back the hind end of your train off with my engine and

shove it in on top of mine. That'd let the *Arrow* out and put us all in safe."

Elmer shook his head doggedly. "I got to have something to go on before I move," he said.

"I wouldn't do it either," Percy Grange muttered under his disconsolate mustache. "I'd let her set."

Acrid smoke from Brick's cigar crawled lazily in a draft. A brakeman cracked a joke, but nobody laughed. The skipper of the 622 said he didn't know. You had to be mighty careful about putting the *Arrow* in jeopardy. He'd think a long while before he got tangled up with that flossy train.

"She's right now standin' still at Gravity," Bricks persisted, "waitin' for me to show. Otherwise, she'd 'a been here."

"How'd you know that?" Elmer flared.

"'Cause she was about on time when I left," Bricks pointed out.

"Jawbone!" Elmer jeered. "First place, it ain't likely the dispatcher would put out a flag against the *Arrow* for a light engine going out into the dark for a drink of water. Sounds to me like there was a misunderstanding."

"He was snowed under at the time," Bricks explained. "He wanted me back so I could get out ahead of a fleet of freights comin' out of Yarbo. I couldn't 'a made the round trip if he took time to fix me up with orders. Of course, he didn't figure the phone would be out."

"Look!" said Elmer, and thrust his chin at Bricks. "You're asking me to stick my neck out too far. You know how giddy some of these train-order operators are they put on when the rush hit us. They wasn't trained, and they sure panic easy."

He jabbed a finger at Bricks.

"Even if the bird that's on duty at Gravity did say he'd flag you back, there's no telling what he'd do when the *Arrow* comes at him and you ain't returned. He knows how much hell is raised when she's delayed, and he gets scared. Figures you got delayed and stayed in the hole here for her. So he gives her the board, and the *Arrow* comes."

Elmer slapped another virulent spit.

"And me," he snorted, "I drag out onto the main iron in the face of that streak of varnish. Mister," he complained, "they'd cut my neck off right under the ears."

Bricks took two easy puffs and maneuvered the mangled cigar the width of his wide mouth.

"There ain't no green op on duty at Gravity tonight," he offered. "Eddie Sand's on the job."

Elmer looked at him sharply.

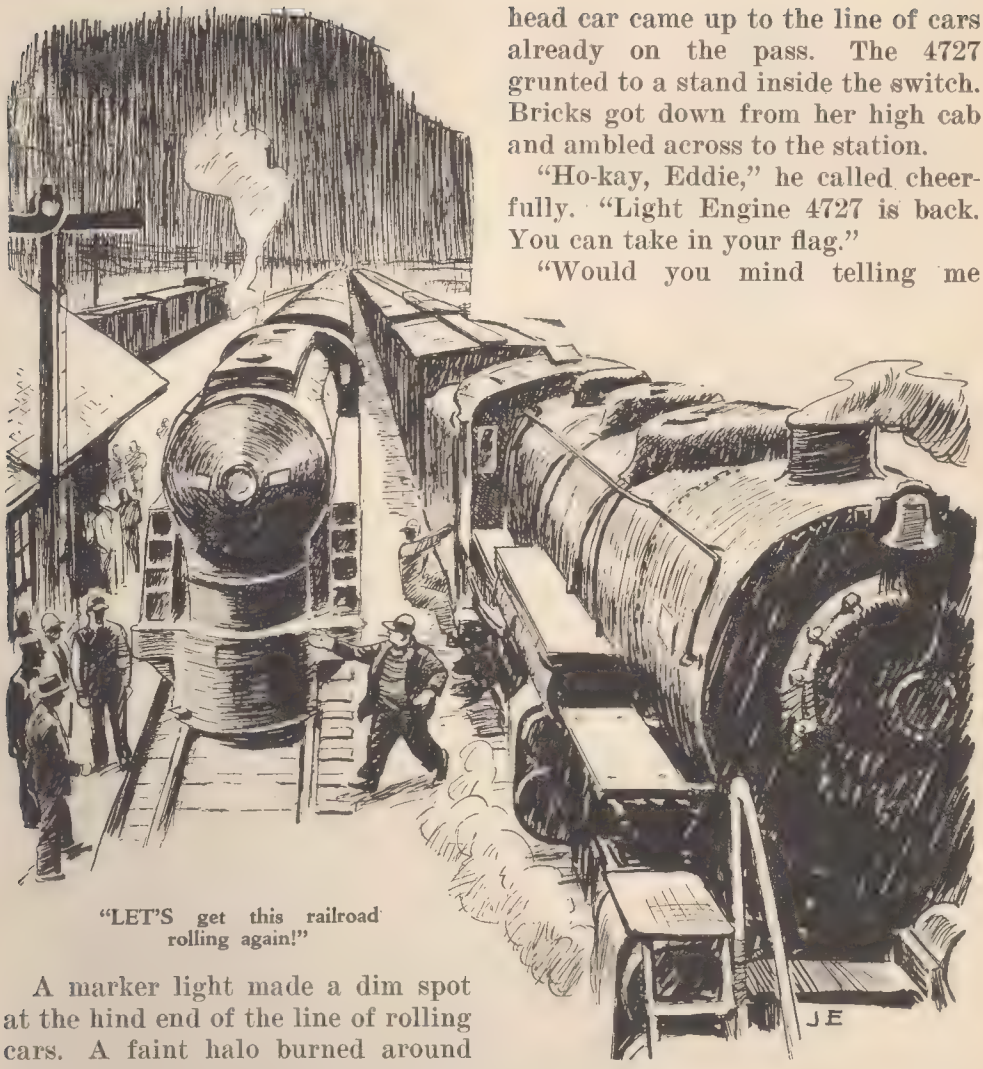
"I thought Eddie was on his vacation," he said suspiciously.

"He's back," Bricks assured him, "and he hung a hoop over the semaphore levers as I was leavin', and he said he'd hold everything west, after the 3444 past him, till I got back."

"Why'n hell didn't you say so in the first place?" Elmer blew. He took his gloves from his hind pocket and put them on. "Let's get this railroad rolling again."

THE string of cars mumbled down the passing track past the group of railroaders on the Gravity station platform. A brakeman, clinging to the head car, signalled a backup with his lantern.

Stanley turned his head from side to side, trying to make up his mind where to start an investigation. Scrap Iron shuffled his feet and said he'd be everlastingly blistered. Bumble said he would too.



"LET'S get this railroad rolling again!"

A marker light made a dim spot at the hind end of the line of rolling cars. A faint halo burned around the rear end of the caboose. Bumble figured out loud that it was the hind-light of a locomotive backing up. And then all at once and all together they realized what was happening. Number 622 had somehow got in Bricks' way and he'd had to bring her in on his flag. The train was too long to clear on the pass, so they'd had to stow part of it on the house.

Engineer Kirk Meadows grinned at Eddie. "Old Bricks can think of more ways to skin a cat."

The brakeman's lantern signal slowed, then waved a stop as the head car came up to the line of cars already on the pass. The 4727 grunted to a stand inside the switch. Bricks got down from her high cab and ambled across to the station.

"Ho-kay, Eddie," he called cheerfully. "Light Engine 4727 is back. You can take in your flag."

"Would you mind telling me what's been going on down there at Mesquite?" Stanley inquired then.

The trainmaster's well-mannered tone caused the engineer to pause. He looked at Stanley and then at Eddie.

"There was some mishaps," he beamed at last. "A crummy on the ground and a gondola on its back across the main track. Likely a switch or two tore up also. You'll have to put all the trains through the eastbound pass around them till you pick' em up and make repairs."

The *Silver Arrow* blazed away across the shimmering sweep of the desert. She howled exultantly as she plunged over the bulge of the world. Kirk Meadows was snatching precious minutes out of the moonlight.

They got Number 622 put together again, and she lumbered away to the east.

Stanley came back to the station.

"I'm sorry, Eddie," he offered. "The chief was tough with me. Said it was likely my job if I didn't move the *Arrow* the minute I got here. But I guess no job is good enough to pay too much for it. I'll remember that next time."

"You'll do all right," Eddie nodded.

He stood listening to the trainmaster's car roar down the old desert road. It took a pretty good man to stand up and eat crow.

Bricks backed the 4727 against her train and pumped up the air. He got down and shuffled across to the station.

He fogged the shabby room while he peered thoughtfully through the haze at Eddie, lounging in his chair beside the telegraph table.

"Seems like you took something out of Stan," he observed. "Appears like you made a Christian out of him."

"Could be," Eddie decided. "He got hurt in a number of places."

"Mebby the right places," Bricks meditated. He puffed. "They was ridin' you hard to let the *Arrow* out against me," he asserted.

"Yeah," Eddie admitted. "They talked about it some."

Bricks' eyes sparkled with faint amusement. "Swell chance they had," he beamed. Then he clouded up. "Eddie," he mourned, "I slipped bad, tryin' to argue Elmer Bobbin into comin' on my flag. He just rared back and wouldn't budge till I happened to bring up that you was doin' the flaggin'. Then he come right in. If I'd had sense enough to say so in the first place, we wouldn't have stabbed the *Arrow* much."

"I wouldn't let it bother you," Eddie advised. "We put on a show for the customers that was included in the extra fare. They won't have much to complain about."

The volume on the telegraph table held Bricks' eye.

"You're always readin' a book," he observed. "Ever find out anything from them?"

"Yeah," Eddie admitted, "you can learn things, and sometimes it comes in handy."

"Huh," Bricks grunted. "You don't need to study a book."

He turned like a tugboat. He trundled across the main track and climbed into his cab. He whistled off.

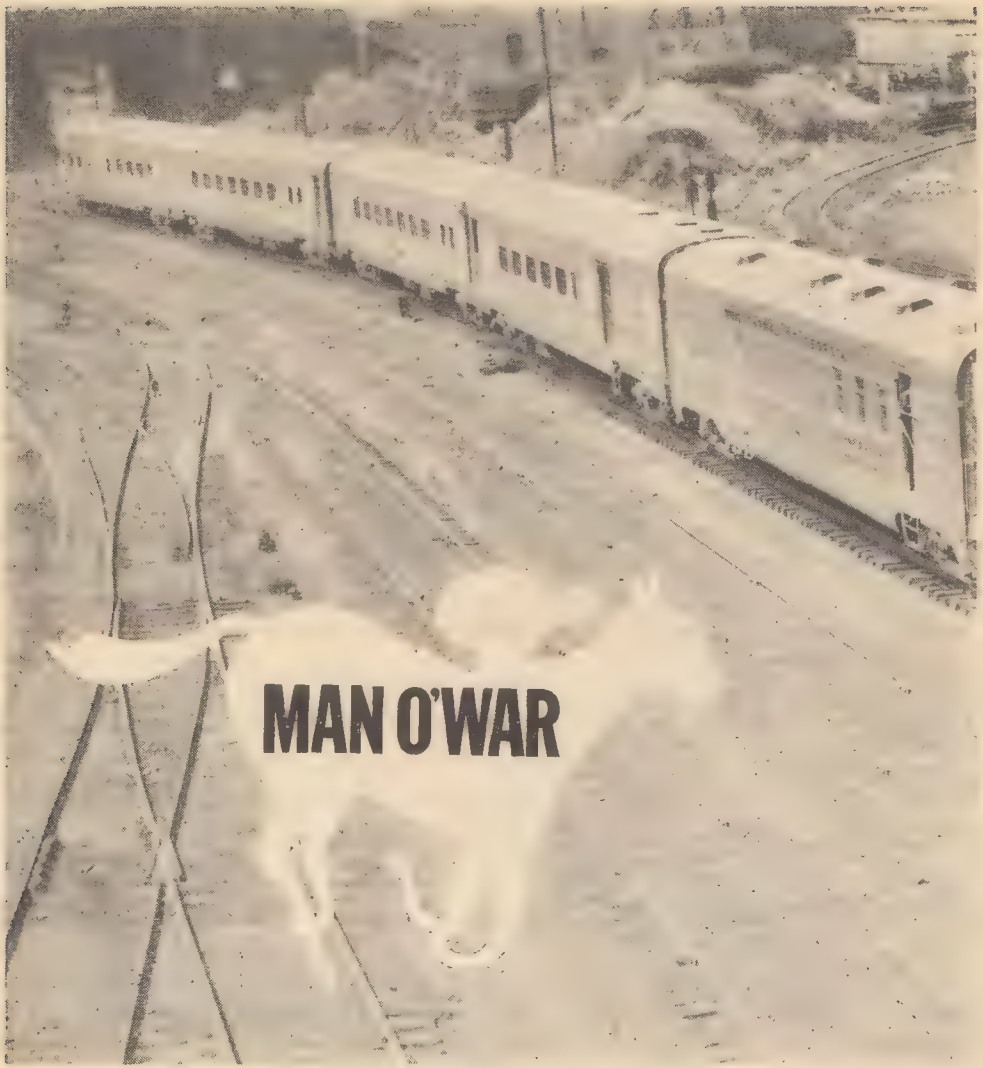
It seemed to Eddie that old Bricks put something beside the sounding of a signal into the two keen blasts of the whistle. It was a challenge, and a kind of shout of derision at the suspicious and the distrustful—the ones who so quickly repudiated jawbone. And there was something else expressed in the high wail, a salutation echoing into the past to the the time when it all began with the infant cry of pint-sized locomotives, far away and long ago. When the Erie wasn't much longer than a shoestring, and the skipper had to throw things at his engineer to get his attention. It was the indomitable clamor of the Iron Horse that had grown into the diapason of a thundering chorus as she laced a continent with an iron web; an exultant declaration that the land was bound

together with mighty, enduring steel.

Shadows flitted and flowed through the haze. Eddie raised a hand in salute to the tubby figure in the high cab window, and to all the men through more than a century who had sat on the righthand side of an engine's cab. It seemed as if there was a mist in the moonlight. But it cleared when he brushed his eyes.

He watched the long train roll out of the siding, watched the red marker lights fade out far down the iron highway.

"Look at that dumb thing right in the middle of the road! . . . No wonder there are so many accidents . . ."



MAN O'WAR

By H. H. GROSS

Associate Editor, Railroad Magazine

AT THE TIME of its opening between Savannah and Macon, 191 miles, Central of Georgia could claim the distinction of being the longest railroad in the world under one management. Fifty years later, in January, 1893, the line inaugurated the country's first name-train, the *Nancy Hanks*. Historical-minded Yankees are liable to imagine the elaborate royal-blue and gold-striped speedster—she made the 294-mile run between Atlanta and Savannah in six hours—took her name from Lincoln's mother. But no; admiration for a six-year old mare who covered the miles in 2:04 at Terre Haute, Ind., September 6, 1892, was responsible for the christening. The *Nancy* went out of existence in less than eight months, but Central of Georgia has never forgotten her record nor her medallion-painted car interiors.

Last spring, when officials proposed

MAN O'WAR does the military honor with four stainless steel coaches named for the forts whose personnel will be the double daily's most consistent patrons: Fort Benning, Fort Mitchell, Fort McPherson and Fort Oglethorpe. Preview at Benning, largest infantry center in the world, was June 18th

two intra-state streamliners between Savannah-Atlanta and Columbus-Atlanta, they were all set to continue in the racing tradition. Slated for inaugural in July was *Nancy Hanks II,* appropriately assigned to the same tracks over which her famous dam had raced to glory behind one of three Baldwins. Earlier, on June 24th, *Man o' War* pulled out of Columbus on his first regular service run to Georgia's most important city. Powered by General Electric Diesel Number 804, the track winner ate up the 117 miles in three hours and fifteen minutes, including time out for stops. This is no faster than the scheduled speed that Eastbound 17 and 19 used to make; though it's five and fifteen minutes ahead of the times of alternates 18 and 20 —and a lot more certain, comfortable and safe.

Part of this route was once the line of the Columbus & Rome Rail Road, termi-

nating at Greenville. In its 114 years of existence the Central of Georgia has amalgamated with twenty-four smaller lines. Present total mileage is 1,815.65, with a considerable portion of track located in Southern Tennessee and the eastern half of Alabama. The road, however, remains predominantly a Georgia enterprise, as wit-

LEFT: "Miss Columbus" poising champagne bottle. Tailgate sign shows racehorse with record of unequalled victories

BELOW: Military and railroad officials foregather under arch roof in the tavern-lounge with such visiting notables as G. E.'s Volney B. Fowler and Budd Company's H. G. McCoy

Photos Courtesy Central

ness the new liners. Intended to link the state's principal cities closer in business, social and cultural relations, the daily *Nancy Hanks II* and the twice daily *Man o' War* are outside the extra-fare brackets and included in the reduction rates established between all CofG points within the boundaries of Georgia.

RIGHT: Superintendent Dillard describing train to sight-seeing visitors. Racing atmosphere is not carried into the cars as it was in the case of the old *Nancy Hanks*

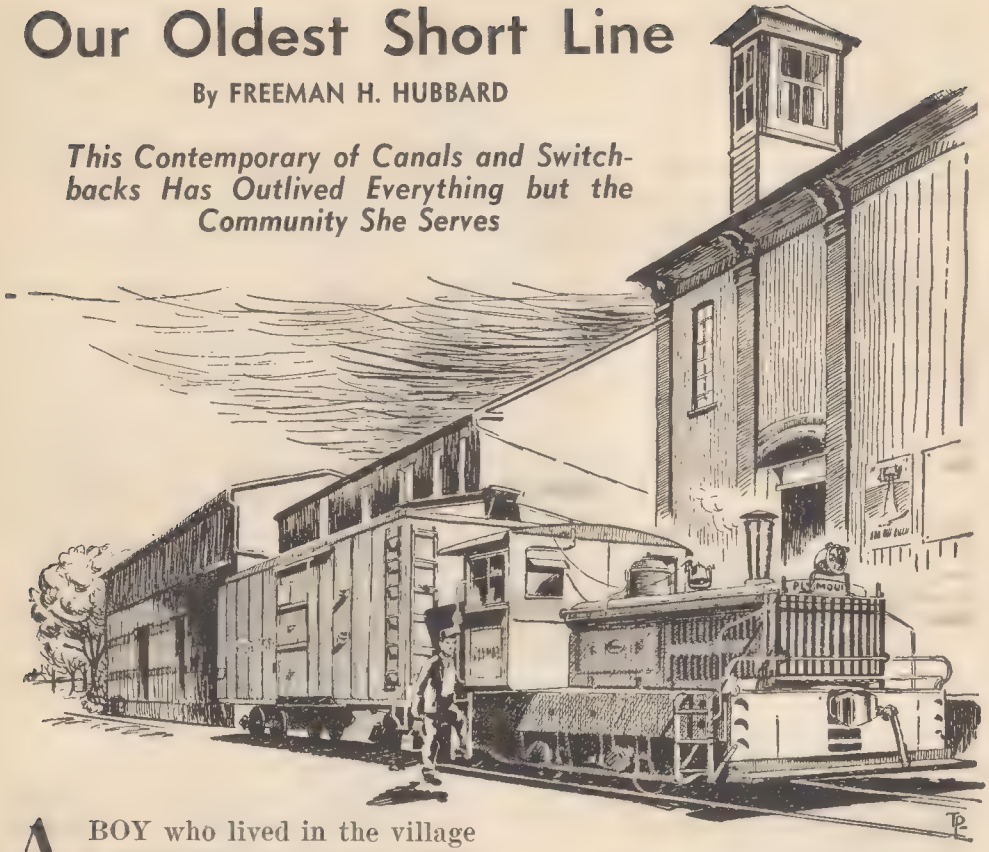
BELOW: Passengers at Chipley, Ga., with $3.10 reduced roundtrip fares clutched in readiness, stream aboard for the first regular run. *Man o' War* makes eleven stops en route

of Georgia Ry. Co.

Our Oldest Short Line

By FREEMAN H. HUBBARD

This Contemporary of Canals and Switchbacks Has Outlived Everything but the Community She Serves



A BOY who lived in the village of Strasburg, Pa., in the 1880s when it had wooden sidewalks, recalls how his grandfather "would send me to the Strasburg Railroad with letters for the engineer to mail at the other end of the 4½-mile line, Leaman Place, where it connected with the Pennsy. I would hand up the letter with a forked stick to a genial old fellow in the engine cab while the train was running, if you could dignify travel at a leisurely pace by the word 'running.' The line cut through several cow pastures. As they rambled along, the crew not only had to look out for cattle but would stop now and then to remove bars from across the track and put them up again."

It seems likely that from practices such as this maybe even on the Strasburg itself, the locomotive pilot acquired its homespun name "cowcatcher" and the forked stick became an ancestor of the highspeed train-order hoop of today, for this wooden-axle pike, presumably the oldest short line on the continent, has its roots deep in American soil.

The Strasburg has not changed greatly in the sixty-odd years since. The crew still keeps a weather eye out for Bessie, the ancient route has never grown beyond the 4½ country miles of curving standard-gage track, and it still connects with the Pennsylvania Railroad at Leaman Place. And, it is safe to say, there are still some tousle-haired lads in overalls who hand up grandpa's letters to a benevolent deity in an engine cab.

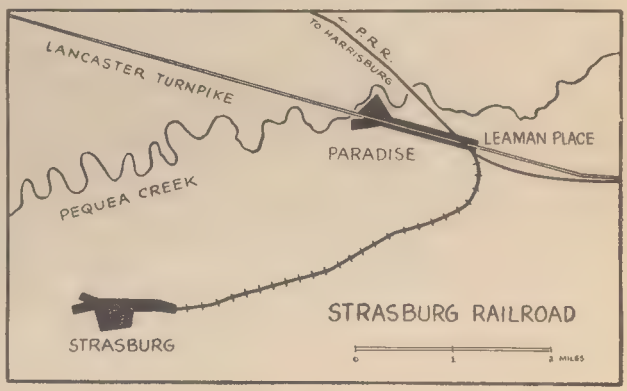
How old is the Strasburg line, anyhow? Let's go back a moment to 1831. That's the year in which the first T-rail laid on any track in the world was riveted to Camden & Amboy ties. In December of that year the Pennsylvania Canal Commission solemnly reported to the State Legislature at Harrisburg that "Canals are from two to two and a half times better than railroads for the purposes required of them by Pennsylvania." But the legislators were impressed by the successful use of the new-type rail in a neighboring state and the following month, January 9, 1832, they voted to charter another railroad company, the Strasburg.

Today the Strasburg is 115 years old. If the Mauch Chunk Switchback, also in Pennsylvania, had not been dismantled a few years ago, it, rather than the Strasburg, would now be America's oldest short line. The switchback was really ancient. Its construction in 1818 was marked by the earliest use of the surveyor's level anywhere on the globe and its rails, over which trains began rolling in 1827, were the first metallic rails seen in America. True, they were only wooden stringers faced with strap-iron, but so were practically all the other rails in the late 1820s and early '30s.

The Strasburg has always used T-rail. Starting with iron weighing less than forty pounds to the yard, it now employs 60-pound steel which it bought second-hand from the Pennsy and which looks puny indeed beside the 152-pound steel of its big neighbor's main stem. The Strasburg still clings to its old spring switches, an anachronism in present-day railroading. This "Methuselah of short lines," to quote Oliver S. Sprout of Lancaster, Pa., whose research forms the backbone of our article, runs between the town of Strasburg, named for a great cathedral city of Europe, and Leaman Place, fifty-seven miles west of Philadelphia, in Lancaster County.

Operated today by the owner's son, Bryson H. Homsher and two other men, Engineer Thomas H. Bair, who is also Strasburg town's fire and police chief, and Ivan Althouse, with the clerical aid of a girl, Miss Mowrer, the little carrier boasts a total rolling stock of one gasoline-powered locomotive, disguised somewhat to resemble a steam engine, and one old boxcar bought from the Pennsy. The Strasburg no longer offers passenger service. A freight train rattles over the line "when needed," which is usually about four times a week. During World War II, Uncle Sam took over this tiny streak o' rust, along with the rest of the nation's rail network, and assigned an army lieutenant to guard it.

"The most freely accepted reason for the failure of short lines," comments Mr. Sprout, "is bus and truck competition or the throwing of a



ROUTE of the Strasburg has not changed in more than one hundred years

All Photos from Oliver S. Sprout, 433 Nevin St., Lancaster, Pa.

POWER like this came from the Pennsy's stable of outmoded reconversions from the old R, M and U classes. The 935, *above*, was sister to the famous 929, a racing beauty who could boast her own private stall

switch by Destiny which resulted in a community being left along a sidetrack of progress, but the Strasburg line has survived both of these adverse circumstances."

TO UNDERSTAND why the Lancaster County road has been able to stay in business despite mounting difficulties, you must realize what types of people inhabit the county from which the line draws its patrons, its executives and its employes. There's a word to describe these people and their institutions; that word is permanence. A few of the local families are Quakers claiming residence in the same vicinity since the days of William Penn, who visited that section in 1701. In addition to the Friends, who still retain their plain garb and simple faith in the brotherhood of man, the county's population includes a goodly number of other religious peoples, particularly Mennonites, Amish folk, descendants of the early French Huguenots, and many so-called Pennsylvania Dutch.

There is a marked similarity in the attire of Quakers, Mennonites and Amish people. The last-named do not use automobiles, telephones or mechanized farm equipment, and are divided into two sects, those who worship in homes or those who worship in severely plain church buildings. All married Amish men wear beards; the single fellows are obliged to remain clean-shaven, regardless of their age.

"Surely," says Mr. Sprout, "families which remain in one locality, often in the identical homesteads, for eight or ten generations, seldom occupying space in an almshouse or resorting to the court of common pleas or receiving a sheriff's summons, make for stability. On the positive side, they have produced many of the state's eminent educators, lawyers, physicians and preachers."

The county is filled with ancient landmarks, such as the Herr house, built in 1719, near the railroad's northern terminus. At one time the Strasburg line was run by Henry Baumgardner, descendant of a Hessian soldier named Leonard Baumgardner who had deserted his command upon landing in the New World and joined General Washington's ragged Continentals. The present owner, Frederick L. Homsher, is a state senator, as his father was before him. Such people with such a background do not change their minds easily. They make products that wear well and they build things that last. Among these things is the Strasburg Railroad.

From the cab window, if you manage to get permission to ride the Strasburg engine, you can see smiling acres of Lancaster County tobacco and seemingly endless fields of luscious red tomatoes. These tomato plants were started in Georgia and shipped north by railway express for the farmers to grow on contract for Campbell's Soup Company. At the time of the national rail strike many such plants were brought up from the South by plane.

You also see veritable seas of gold wheat, peas raised locally for contract canning, and clean dairy cattle meticulously cared for, and beef cattle received from the Western plains. Local men buy the beef cattle, feed them for several months, and then resell them to the metropolitan markets at a nice profit. The Strasburg train passes plenty of the "bank" barns distinctive to Lancaster County, where the earth is piled up in such a

way that the farmer can drive right into the barn's second floor. It is a common saying thereabouts that the farmers built their barns before their homes. Here and there you can spot an Amishman's barn, always painted red and frequently displaying hex signs supposed to ward off such evils as lightning, fire, disease and hailstorms.

Naturally, most of the Strasburg's freight is agricultural. The road handles such incoming loads as coal, lumber and farm machinery as well as outgoing shipments of tobacco, feed, dairy products, vegetables, livestock and the like. Until 1901 it also carried passengers, plus mail under a Federal contract inherited from the stagecoaches; but in that year trolley cars began competing with the 4½-mile railroad, and because the trolley route was more direct than the rail route it took over both the mail and the passengers. Later, the trolley lost out to the automobile.

"Passenger fare on the Strasburg Railroad was twenty-five cents one way or forty cents a round trip," Mr. Sprout recalls. "I never rode over any stretch of trackage similar in length on a Class 1 road or otherwise, that yielded more pure enjoyment, with every curve, hill and hollow providing some historical interest or pleasant rural scenery."

The little mixed train used to stop for passengers anywhere along the line. Once a lady passenger wanted to get off at Andrews' barn, or some such place, and the crew forgot to stop there but later backed up nearly a mile for her convenience. Even today a peculiar relationship exists between the Strasburg line and the immemorial sport of fox hunting. A fox released for the chase is customarily allowed fifteen minutes' grace before the riders and hounds set off in pursuit. If Reynard elects to lope down the Strasburg right-of-way during that quarter-hour, no train runs until both he and the pursuers are out of sight.

A colorful Strasburg engineer of the early 1900s was "Old Billy" Westfall, who handled the road's only locomotive. Mr. Sprout relates that Billy rarely rode a seatbox in the regulation manner but perched himself jauntily on a window sill with his big feet planted on the cushion. From that vantage point he cajoled the boys of the neighborhood into doing many of his chores.

For example, the package freight was unloaded at the Pennsy's westbound baggage platform at Leaman Place, four tracks from where the Strasburg road connected, and Billy had the youngsters tote all of the less-than-carload lots over the four tracks and put them in the "house car." In payment for this aid, the lads were permitted to take turns running the engine into Strasburg on alternate days under the old hogger's eagle eyes.

The fact that the road was down grade all the way from Strasburg into the Junction was not lost sight of. These same youths were also allowed to drop the empty cars down the hill, one fellow riding the top of each car. This arrangement often saved the expense of having the locomotive and Billy himself make that trip.

It worked fine for a while. Then one day a boy neglected to test his brakes before starting down grade; the empty car ran wild, smashing two others. As a result, the company put a permanent embargo on amateur brakemen.

WINTER complaints were many on a road where the hogger often had to assume the roles of flagman, brakeman and conductor. In modern days, his assistants are numerous. *At right:* The crew digs in and out—all with perfect good humor, for what is one more snow drift in a Lancaster County pasture?

ON JANUARY 15, 1834, when the charter of the Strasburg Railroad was two years old, its books were opened for subscriptions; but if you think that actual construction of the road was started shortly afterward you do not understand the conservative nature of Lancaster County folk. Those people sat back and waited.

The first railroad train to reach Lancaster County arrived March 31, 1834. Consisting of three horse-drawn passenger coaches equipped with flanged wheels, it traveled from Philadelphia to Columbia over what is now part of the Pennsy main line. Later a locomotive, the *Black Hawk,* puffed into the county under her own steam. However, even with this demonstration to boost their zeal for effective transportation, the Strasburgers did not get their own railroad built and in running order until 1851.

After that, the fervor for transportation which affected the entire community was reflected in the chartering on May 31, 1853, of the Lancaster County Locomotive Works under the presidency of a brewer named Daniel Cockley. Two years later James Black succeeded him. This plant, covering five acres, turned out thirty locomotives, one of which drew the special train which bore a future King of England out West to shoot bison under the tutelage of "Buffalo Bill" Cody. The locomotive works was eventually taken

over and operated successfully until 1879 by Edward Norris.

Meanwhile, in 1861, when the Civil War broke out, the Strasburg Railroad ran into financial difficulties and was sold at a sheriff's sale for seven cents on the dollar to a group of twenty-three men headed by Feree Brinton. Gradually this syndicate sold their individual holdings until, in 1863, the year that marked the turning point in the Civil War and the first use of steel rails in America, control of the little carrier rested in the hands of John F. Herr and Cyrus N. Herr. In 1866 A. M. Herr joined the company.

Feree Brinton sprang from the Feree family of French Huguenots which had settled in Pennsylvania as early as 1712, while the Herrs were the foremost Mennonite family in that vicinity, having settled there in 1710. Mr. Sprout comments: "It calls for no great stretch of the imagination to recognize that, in 1866, we here witness the pioneers' descendants struggling to maintain the traditions of their community."

In that year, with the war just ended, the Strasburg's owners added to their railroad business a large steam flour mill, a big machine shop and a planing mill, thus giving the setup a more complex character. When, in 1871, a disastrous fire destroyed these buildings, so vigorously was the reconstruction work carried on that a two-and-a-half story house included in the destruction was rebuilt and reoccupied within the short space of six weeks after the conflagration.

The national panic of 1873, however, was too much for even the thrifty Strasburgers. They sold their railroad, with its associated enterprises, for $12,725 to Thomas and Henry Baumgardner, whose Revolutionary ancestry we have already mentioned. In 1876 the Baumgardners leased the properties to one Isaac Pheneger, who had been the Herrs' bookkeeper. Pheneger kept the road on a paying basis for a dozen years; and then Edward Mussleman carried on until 1898, when a kinsman of his, Frank Mussleman, bought the road from the Baumgardners and operated it for two decades.

In 1918 the Homshers acquired the railroad, lumber and coal business under a lease to old John Homsher. At his death his two sons, Frederick L. and John E., inherited the lease. Eventually Frederick, who is a banker as well as a state senator, bought the oldest American short line outright and has owned it ever since. His son Bryson, two other men, and a girl handle the actual work of operating it.

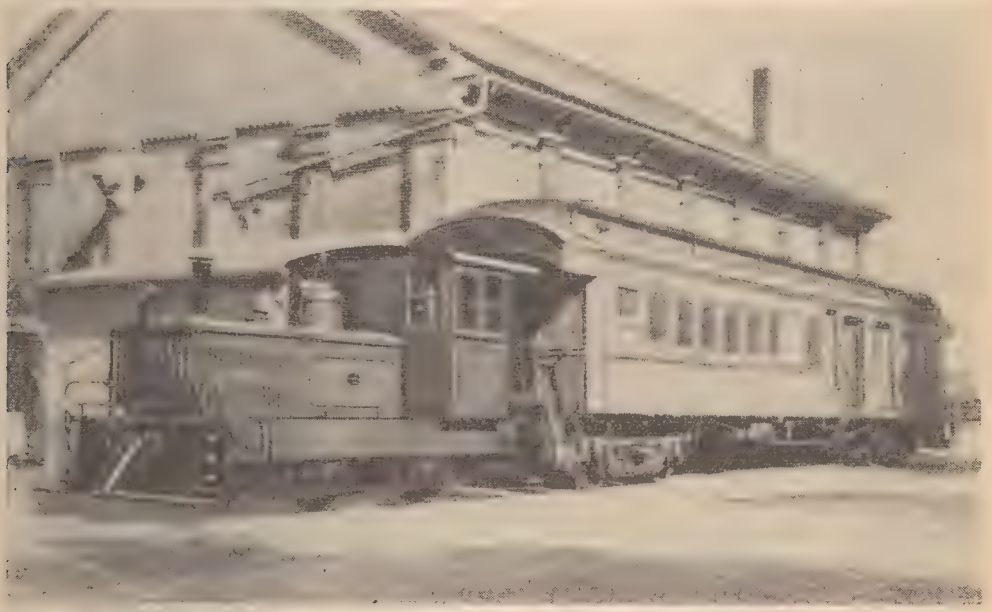
For many years the little road pursued a policy of buying outmoded locomotives from the Pennsylvania Railroad to fill its needs. These were old classes H3a, B3 and A3, respectively converted from yet older classes R, M and U. Last of the line of second-hand steam engines was the famous 929, Class D-13a. This old gal, built in 1893, had for years hauled the Pennsy's pay-car over its Philadelphia Division.

In those days, oldtimers will tell you, it was a common practice of large railroad companies to pay their employes from a money-wagon, as it was called. J. Milton Meshey, Philadelphia Division paymaster, rode behind the 929 and paid the men, most of whom he knew by name and sight. The same engine was used occasionally to haul special trains for PRR executives and was kept trim and resplendent all the time she remained

on the Pennsy roster and afterward.

"She was a beautiful example of the breed with Russia-iron jackets, polished cylinder-head casings, brass flagstaffs and jacket bands, and highly burnished copper piping," Mr. Sprout reminisces. "A boxed-in stall was set up at the old Pennsy passenger-engine house along Seventh Street in Harrisburg to keep the pet 929 from being contaminated by the other power. But the time came when beauty could not take the place of utility, and the 929 presented a sorry picture when I last saw her in a Lancaster junk yard,with no hint of the previous gold-leaf striping on her painted wooden pilot or driving-wheel spokes."

The Homsher management had not been in control of the Strasburg long before it realized, rather painfully, that the Railroad Safety Act of 1911, amended in 1915, required that the solitary Strasburg engine undergo periodic inspection and be sent to Pennsy shops for repairs. Due to her age, the former pay-car engine needed much attention, which interfered seriously with her usefulness. So in 1926 the tiny road scrapped the 929 and has been using a gasoline-powered engine ever since. Sometimes the load is too heavy for the gas locomotive, but this problem is met by "doubling"— that is, hauling only three cars at a time and taking the remainder out on a second trip.



THE PLYMOUTH with the old combine car at the warehouse unloading platform

Thus we see that neither wars, depressions, financial difficulties, changes of management nor any other thing has been able to stop the operation of trains over America's oldest short line. Mr. Sprout puts it this way:

"Had these deeply religious people not erected their institutions as they did their barn yards, 'horse high, bull strong and hog tight,' the institutions would not have enjoyed the permanence which they do, and the Strasburg Railroad would long ago have passed into oblivion with the Conestoga wagon and engine 929."

Light of the Lantern

Signaling and Electronics

By LIONEL M. RODGERS

LAST MONTH we traced some of the technological advances which can and will be applied to the Railroad of Tomorrow. We have seen how Centralized Traffic Control has placed the operation of trains on an entire division under the direct control of a dispatcher. What is the ultimate in this direction?

Up to the present time a single-track line has always been thought of as one track with passing sidings. Even on many CTC installations, that definition still holds. For while the passing switches are remote-controlled, lowspeed turnouts onto unsignaled sidings result in wasted time and in foggy weather, the possible risk of a rear-end collision. The future CTC layout should follow the pattern established some years ago by the Norfolk & Western on its Shenandoah Division, where equilateral turnouts (those in which tracks fork to right and left of the center line of single track) are used; said turnouts are equipped with track circuits. Such improvements permit highspeed operation in both directions and make for cheaper transportation.

So much for getting trains over the road on accelerated schedules. But faster handling of cars in yards is equally important. Improved and simplified paper work may not involve electronics but the

LEFT: N&W'S time freight classification yard at Portsmouth, Ohio. Retarder-equipped hump yards, sodium floodlighting, radio telephony and teletyped switch lists speed terminal operations

forwarding of wheel reports by teletype in advance of inbound freight trains does. With such a system, classification moves can be plotted before a merchandiser enters the yard limits. We can look, too, to a greater use of retarder-equipped hump yards and the widespread adaptation of radio as a switching aid.

Due mainly to transmission troubles on available radio bands and a lack of really satisfactory equipment, the railroads were for many years loath to install such communication systems between locomotives, cabooses and fixed stations. But the war provided a several-pronged impetus. First the heavy volume of traffic and reduction in available manpower made it necessary to resort to technological means to increase plant efficiency. Secondly, greater traffic provided the necessary revenues for such improvements. And, finally, the war effort produced extensive research and the development and perfection of techniques in those radio frequencies which are most likely to be useful to the railroads.

Yard installations are already past the experimental stage. Pioneered by such railroads as the Norfolk & Western (Roanoke), the Chicago & North Western (Proviso) and the Baltimore & Ohio (Baltimore), they are rapidly becoming an essential adjunct to the modern freight terminal. In general, two schemes have been tried, each with its advantages. First, there is the carrier current system in which the rails and wayside wires carry relatively low-frequency radio currents. No radiation occurs away from the right-of-way, and no license is required. Power requirements are relatively high and unless rail is properly bonded, the signal may become too weak to be detected. The second type is a radio system at high frequencies. Small powers are involved and the only serious problem is the allocation of radio channels. The development, during the war, of tubes and equipment which make it possible to operate on 300 megacycles and above, permit access to previously untouched parts of the radio spectrum. Such units are relatively cheap, use but a small amount of space, and have low power requirements. The sets which stood all sorts of abuse in tanks, planes, and other military applications, with a minimum of maintenance, are equally adaptable to railroad terminal work.

But it is on the main line that radio communication will appear in its most colorful role. Before the war a few scattered efforts were made to bridge the gaps between

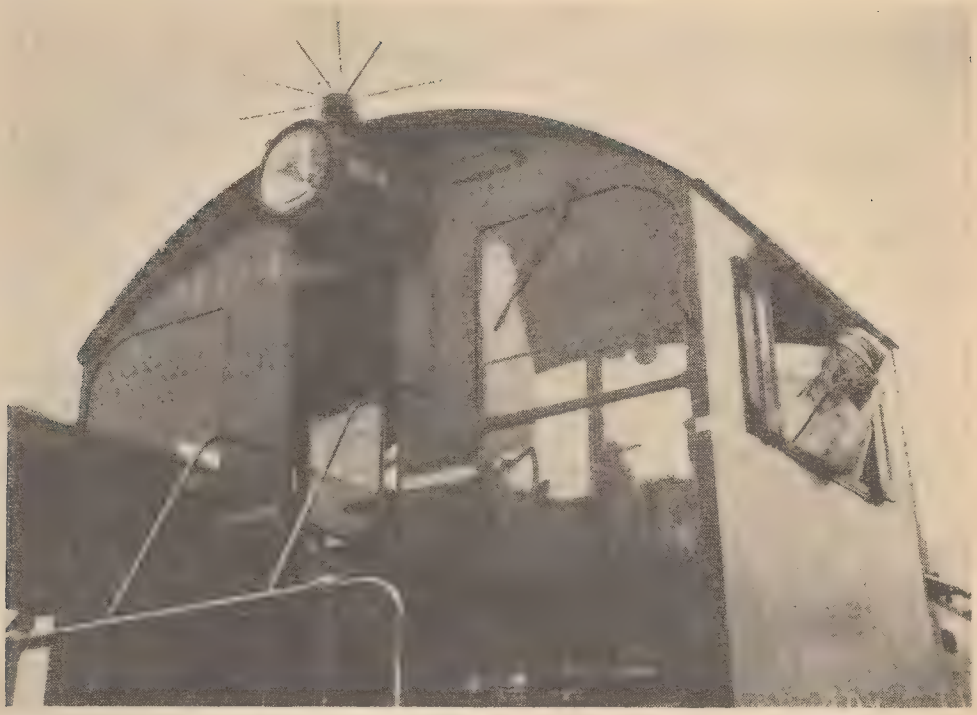
ABOVE: Walkie-talkie. With a small, two-way portable like this Farnsworth set, a trainman is in constant communication with caboose and engine

B&O President Roy B. White sends order inaugurating radio operation of trains in the road's Baltimore Terminal

locomotive and caboose, train and train, and trains and wayside stations. The most notable of these was the Bessemer & Lake Erie's carrier-current installation, applied to a number of engines and cabooses. Then in 1944 the Pennsylvania carried on extensive experiments on its Bel-Del Division, following which the road announced its intention to equip three hundred locomotives, nine hundred cabooses and six towers on its Middle and Pittsburgh divisions. Due to transmission line interference, it was found impracticable to make similar applications in electrified territory but the mainline installations west of Harrisburg are already paying dividends.

Just a few months back, the engineer of a westbound freight traveling at restricted speed through the misty night, near Warrior Ridge, Pa., heard a voice break through on his "trainphone," warning all trains to stop at once. That was the first indication he had that a huge steel plate on the seventeenth car behind him had shifted, slicing its way through the flank of a speeding coach on an adjacent track, then pivoting and derailing an eastbound freight on the opposite side. The warning came from the engineer of the passenger train, who had felt the first impact of the plate as it scraped against the side of his cab. How much more damage the lethal load might have caused on the busy four-tracked Middle Division it is impossible to say.

But it is in the more routine operation of freight trains that such installations as the PRR's will show day-in, day-out advantages which operating departments throughout the country cannot fail to seize upon. The ability of a conductor to call an engineman and vice versa is of the first importance. Under such conditions it is possible for a long train to clear switches or road crossings by oral instructions rather than through guesswork; to stop a train from the rear without "pulling the air", with resulting risk of break-in-two; to eliminate hand signals; and to call in a flag, either with a small airhorn on the



B&O Engineer Ambrose Miller receives the order in cab of Diesel switching engine equipped with umbrella-type antenna

caboose roof, or by the medium of a small walkie-talkie. In times of emergency a dispatcher or tower operator has direct access to the engine cab, but it is unlikely that verbal instructions will greatly alter present operating rules. To date, at least, it is an adjunct—not a substitute.

In the passenger field it is interesting to note that three eastern railroads have already announced that they are equipping their crack flyers with train-to-telephone service which will make it possible for passengers speeding across the countryside to talk with home or office.

To summarize briefly: it is expected that there will be improvements in Centralized Traffic Control and extensive installations, particularly on single-track lines carrying moderately heavy traffic. The use of radio in yards will become universal and, by it, yard operations will be greatly accelerated, particularly in periods of fog and other bad weather. Radio will be installed extensively on locomotives and cabooses in road service, as well as in telegraph stations and towers. Radio can also be expected to increase passenger convenience. Not developed as yet, but urgently needed, are electronic devices to supercede Rull 99 (flagging) which, as we noted in our previous installment, has been rendered obsolescent by the high-speed operation of modern, heavy trains.

Photo by Kent W. Cochrane, 104 Camp St., New Britain, Conn.

ALCO power on the New Haven's Maybrook line at Shelton, Conn. The 4500 h.p. Diesel-electric is smaller, four-wheel-trucked counterpart of the widely publicized 6000 h.p. road engine

INFORMATION BOOTH

1

WHAT *became of the equipment of the Union Pacific's original streamliner* City of Portland?

This train was dismantled on August 13, 1941. All of the trailing cars were scrapped but the power plant was removed from its car, a new body was built around it and it is now used as a C unit on a *City of Denver* streamliner.

2

HOW *heavy is the heaviest rail used on any railroad?*

We've covered this question before, but the Pennsylvania Railroad has just given us a new answer. At the present time Standard Railroad of the World trackworkers are busy laying three new designs of heavy-duty steel rail on PRR mainline trackage, one of which weighs one-hundred-and-fifty-five pounds to the yard.

3

SUPPLY data on the New Haven's Dieselization of its Maybrook, New York-to-New Haven freight service.

Already the third largest Diesel-owning railroad in the country, the New Haven is currently embarking on a new application of motive power in its freight service calculated to effect savings of more than $1,300,000 a year in actual costs. The specific project now taking shape is complete Dieselization of the route between Maybrook, point of interchange with five other carriers, and Cedar Hill yard at New Haven, a total of 125 miles. Two 3-unit 4500-horsepower Diesel freight locomotives, of an order for 15, have already been received from American Locomotive Company. Balance of the power is expected by the end of 1947. Certain changes on the right-of-way and in the signaling system will be required before maximum efficiency of Diesel operation can be attained.

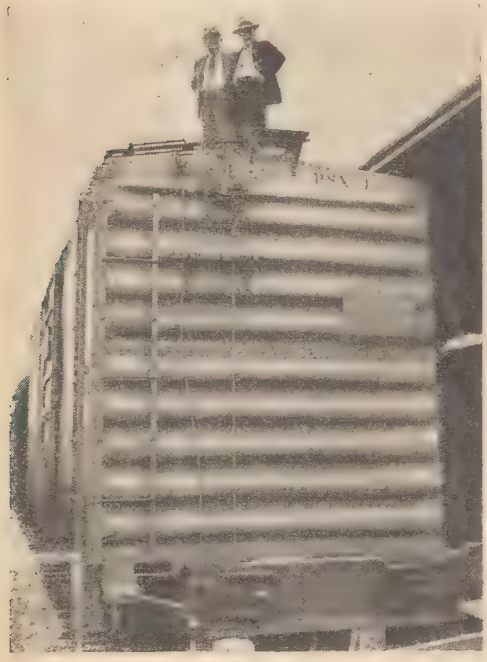
One of the new locomotives already in service hauled 83 cars of perishables, total load 3,988 tons due for delivery the following morning in Boston, Providence and the New Haven area. The nearly 4000 tons in a single train eastbound compares with a load limit of 2000 tons for steam without a helper over grades up to 1.16 percent. Westbound grades at some points are more severe, requiring much lower load limits than are now possible with Diesels. However, getting a freight train over a hill safely and efficiently is not simply a matter of enough energy to conquer the upgrade. In fact, it may be equally hard to hold such a train within safe speed limits on the down side. This the New Haven Diesel does merely with the application of the dynamic brake, the driving motors being turned into generators. On a test run the heavy string of reefers moved along at speeds up to 45 m. p. h. at points, while elsewhere the braking on grades held the train at the desired rate of less than 15 m. p. h. Top-rated speed of the locomotives is 65 m. p. h., but New Haven plans to use a top of 50.

The dollar savings estimated above comprise the following principal items: savings in train operation and pusher service, $860,507; enginehouse savings at Maybrook, $65,176; release of older type Diesels for use elsewhere on the road, $397,816. On this all-freight route of considerable traffic density, the record of one recent month showed 360 eastbound and 361 westbound train movements at Maybrook. For that movement Diesel fuel costs are calculated at only a little more than half that for steam operation; locomotive repairs, about one third; crew wages, the same; and in addition the complete elimination of pusher service at two points.

4

HOW *great is the yearly consumption of coal on a large railroad, the bulk of whose traffic is handled by steam engines?*

The Illinois Central, one of the nation's leading coal roads, is a fair example of the kind of road you ask about. This Mississippi Valley carrier's steam locomotives consumed a 1,700,000-ton mountain of coal in 1946. This amount of fuel, purchased by the IC from West Kentucky mines in its territory, would fill a 227-mile-long train, composed of 30,371 coal cars and 480 of the Illinois Central's most powerful 2700-class freight engines, each of which measures ninety-two feet from end to end. Such a Paul Bunyan coal train would extend from the IC's Louisville Yard to the road's garden in Paducah. The Illinois Central not only consumes large quantities of coal, but derives thirty-five percent of its revenue freight tonnage from this source.



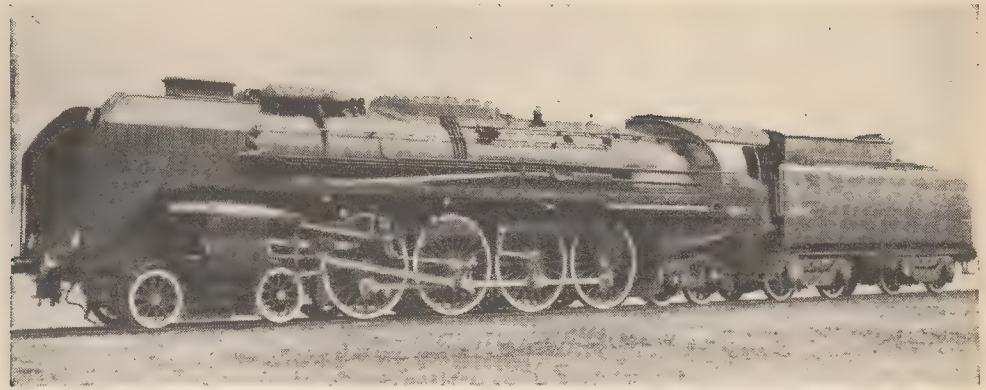
5

WHAT'S *the data on the performance of Pennsy's Class S-2 steam turbine locomotive during the past three years?*

In service since 1944, the S-2 first hauled fast, heavy passenger trains over the PRR's Ft. Wayne Division racetrack between Crestline and Chicago. It made existing schedules without trouble, even under severe operating conditions. When the S-2 had made approximately 50,000 miles on the road, she was brought into the Pennsy's Altoona Works and put through a complete cycle of tests. Opening step was the complete inspection of her propulsion equipment. The wheels were dropped and gear-case covers removed to lay bare the speed reduction gears, drive cups, turbine blading, bear-

CAR IN A PACKAGE

New Pullman-Standard product is standardized boxcar, designed for high-speed production in vast numbers at low cost to the purchaser. Designated P-S-1, the new model features extensive use of welding instead of riveting, wherever it is economically advantageous. Although manufacturing on a commercial basis has only just begun, orders for the new car are already close to the 10,000 mark. Customers, to date, include NYC, Southern, Seaboard, MeC, LV, NYC&St.L, C&O New Haven, B&M, Santa Fe, CGW and KCS



POSTWAR power for the French National Railroads. This 5000-horsepower Northern type attains a speed of 75 m.p.h. with a train of 950 tons, on level, tangent track

ings, and reversing clutch. In general, all parts were found in good condition and all reduction gearing was in perfect shape. There was no evidence of undue wear, pitting, galling, or any of the usual afflictions of gearing subjected to the severe loads imposed on the S-2. As was expected, the turbine blading showed slight erosion, but no repairs were needed. The flexible drive that connects the axle with the final drive gears and cushions the gears against road shocks revealed some signs of wear. To give the latter a life equal to that of the propulsion unit, the minor design changes were made in lubrication system and in parts of the flexible drive.

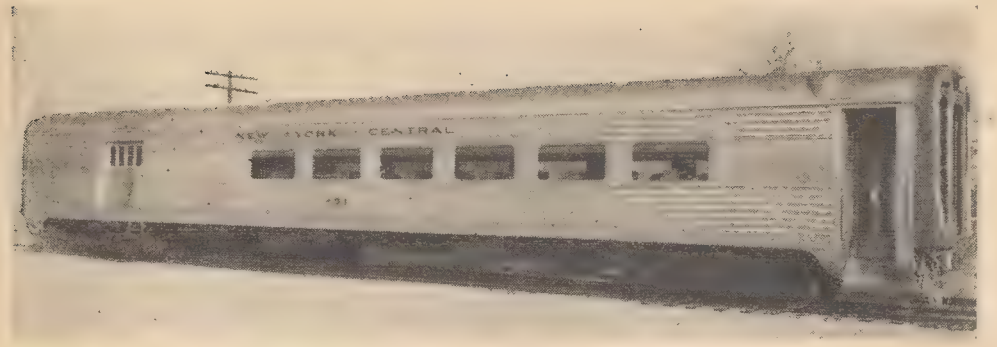
On the test plant, the locomotive developed its maximum of 6206 drawbar horsepower at 75.2 miles per hour and 5250 horsepower at one hundred miles per hour. The highest overall efficiency of 7.7 percent was obtained at sixty-six miles per hour when developing 3680 plant drawbar horsepower. Performance on the test plant indicated the locomotive's smooth accelerating qualities and freedom from the vibrations inherent in reciprocating locomotives. Dynamometer car tests on the road, made prior to placing the engine on the test plant, showed a starting tractive force of 75,000 pounds. This fully met expectations and put at rest the belief of many that a turbine must rotate at high speed to develop torque.

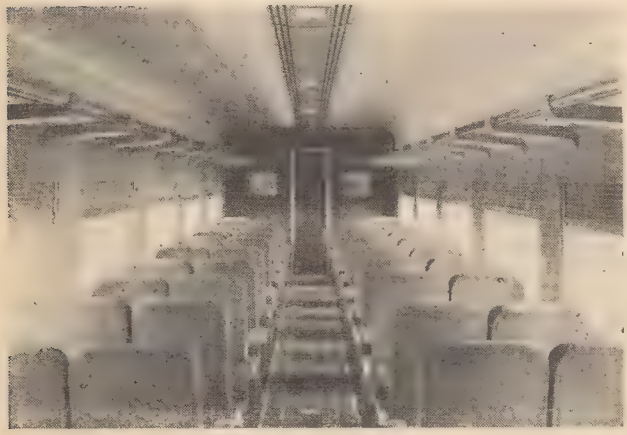
The S-2 now seems to be headed for a full, useful life. It is again in regular service between Crestline and Chicago, operating at a top speed of eighty miles per hour. The record made to date will unquestionably affect future plans and designs for the geared-turbine steam engine. For this reason, one important characteristic of the locomotive should be remembered. Even though the turbine drive removes many of the limitations that must be considered in designing a reciprocating steam locomotive, the S-2 contains a conventional fire-tube boiler, operating at temperatures and pressures commonly used at present with such boilers. What effect modification of boiler and firebox design can have upon the ability and efficiency of this type of power awaits further development.

6

THE *undergate air distributor was described in your answer to Question 8, in the October Information Booth. Are there any other ways to effect greater operating efficiency in the modern steam locomotive?*

New world records for coal-fired steam engines were reported to operating and engineering officials of many of the larger railroads of the United States and Canada, when they met at Battelle Institute last





LIGHT-WEIGHT COMBINE

DAYS of the dreary combination baggage car and coach, with a quarter of a ton of rice coal neatly distributed on its straight-back seats, will be a thing of the past on New York Central trains equipped with these streamlined, aluminum-alloy combines. Weighing 34 percent less than conventional cars of comparable capacity, the new, air-conditioned equipment was built by ACF at its St. Charles, Mo., plant

spring as guests of the motive power committee of Bituminous Coal Research. From October 1, 1946, through March 31, 1947, six coal-fired Niagara class engines of the New York Central made greater monthly mileage than was ever thought possible for a steam locomotive. Individual engines made world records exceeding 28,000 miles a month in the six-month period in which all six operated 786,818 miles at an average of almost 22,000 miles a month. The locomotives were assigned to passenger trains running between Harmon, New York, and Chicago, a distance of 926 miles. They were refueled twice enroute.

7

ON a recent visit to the Smithsonian Institute I saw a photo of a locomotive built by Norris Brothers, in Philadelphia, which had a six-wheel lead truck, and a single pair of eight-foot drivers. Would you kindly give more information concerning this oddity?

This single-driver locomotive designed by Robert L. Stevens and Isaac Dripps, and known as the Stevens type, was built by Norris Brothers for the Camden & Amboy Railroad about 1849. Although seven engines of this general design were constructed, they never found great favor, because the small boilers could not furnish enough steam for the large 13x38-inch cylinders. The driving and truck wheels were made of wrought iron, and the spaces between the spokes filled with wood. The fire door was below and behind the axle, and the fireman stood in a pit, the bottom of which was on a level with the bottom of the ash pan. The weight of the engine was about 47,000 pounds. These engines were inspired by the Crampton locomotives of England, which excited the admiration of C&A's

President Stevens, during his visit to Europe in 1845. He advised Mr. Dripps to design a locomotive of the same general type, and Norris was commissioned to build it. In the smoke box there was a deflecting plate over the tube plate, this being the first use of a diaphragm for spark arresting. The top of the dome carried a safety valve whose lever extended to a spring scale. Steam gages were not then in use. Near the stack was a safety valve, encased to prevent the men from meddling with it. The six-wheeled truck was pivoted to the boiler so far back that it carried most of the weight. As a result the engine was very deficient in adhesion and prone to jump the track. The center pair of wheels were unflanged. These engines ran from 1849-50 to 1861-62, and one as late as 1865. Two of them were completely cut up for scrap. The cylinders and guides on the others were used on a few of the eight-wheeled engines with six-foot wheels built at that time.

8

PRINT *a brief account of the Toledo, Peoria & Western's present status.*

Strikebound for twenty months following a period of wartime operation by the government, the Peoria Road has resumed its normal function of a 239-mile bridge line between major carriers at Effner, Indiana, in the east, and Lomax, Illinois, and Keokuk, Iowa, in the west; and is working its way steadily back toward profitable operations. Physical rehabilitation is being carried out as rapidly as possible, along with a renewed program of traffic development. The road has shown a steadily rising gross revenue since resumption of normal service last

HEADING down the Hudson, nine hundred miles east of her Chicago Terminal, Niagara 6019 contributes to the amazing performance record of six New York Central 4-8-4s which ran off nearly 800,000 high-speed miles in the last half year

STREAMSTYLED for straphangers. First of 650 subway cars soon to be delivered to New York City's IRT, the 1575 stands ready for public inspection at the Sixth Avenue Lines' 34th St. Station

May. Currently the road is negotiating with the government for recovery of about three million dollars as result of the wartime operation. About a third of this will be required for deferred maintenance, mainly on right-of-way. Eventual Dieselization is contemplated by President Russel Coulter, who figures the 60 steam engines could be replaced by 45 Diesels.

9

DESCRIBE *the new subway equipment which New York City's IRT Division is going to place in operation.*

On July 10th Mayor O'Dwyer inspected Car Number 1575, which stood on a siding in the Independent Division's Chambers Street Station, and was coupled to one of the standard dark green cars by way of contrast. The model car, product of a year of experiment by contract firms and engineers of the Board of Transportation, was rebuilt from an old one, which had been in regular use on the Independent lines until it was crushed in a wreck August 24th, last year. At the ACF Plant at Berwick, the 1575 was turned into a $31,000 straphanger's dream car. Sylvania Electric engineers had experimented several months before with fluorescent lighting, and were able to install this type of illumination in a subway car for the first time in history.

Side walls of the car were recessed and seats moved in four inches, making about eight more inches of space in the center aisle and allowing for ten more standees. The engineers have also added one more seat by arranging them transversely at the center and ends, instead of using all side seats, a characteristic of present IRT equipment. Stainless-steel hand grips have been introduced, forty instead of twenty-eight; doors were made four inches wider; signs illuminated and put higher on the car; and the windows consist of one solid pane instead of two.

The interior is gray, blue, cream and yellow, and the sides are made in one piece, of welded steel, painted gray and green with two bright orange-red stripes. On daily display for several days after its premiere, from 10 a.m. to 8 p.m. at the southbound platform of the Sixth Avenue Subway's 34th Street Station, the car attracted visitors at the rate of one thousand an hour.

Best news of all for IRT patrons, 650 new cars of the same design are now on order, for delivery in 1948.

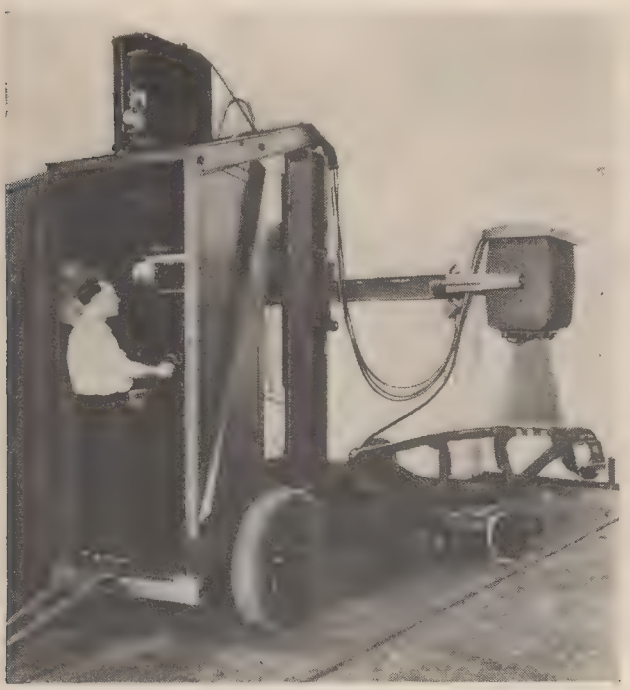
10

I UNDERSTAND *that the New York Central placed an additional order for Diesel power this year, following their large order for sixty-six units last year. Please give particulars.*

On April 28th the Central announced a further order for seventy units of Diesel-electric road motive power, both passenger and freight, costing twelve million dol-

lars. Altogether, the total number of units now on order or in service is 158, a figure that gives NYC one of the largest fleets of Diesel road locomotives in the country. For two and a half years the famous *20th Century Limited*, only extra-fare train between New York and Chicago, has been pulled between Harmon, New York, and Chicago by Electro-Motive Diesels. Covering the 929-mile span each way daily, the *Century* has rolled up more than a million and a half miles of Diesel operation. The *Southwestern* and the *Knickerbocker*, on the New York-St. Louis run (NYC-Big Four), are similarly powered between Harmon and Mattoon, Illinois, 1020 miles. The Central already possesses more Diesel yard switching locomotives than any other railroad, maintaining a fleet of 256 such types of power, nine of which are equipped for operation with trailer for hump service.

The new order for road motive power units, delivery of which should be completed by the end of this year, consists of sixteen 2000-horsepower passenger units; forty-one 1500-horsepower freight units; nine 1000-horsepower road switchers; and four 1500-horsepower road switchers.



MOBILE X-RAY machine in PRR's Altoona, Pa., laboratory detects hidden flaws in interior structure of high tensile steel. Lead-lined cab protects operator from possible injury by stray radiation

11

I UNDERSTAND *that the Union Pacific is constructing a new tunnel in Wyoming which will be the longest bore on its lines. What about it?*

Late last May the UP began work on an eight-million dollar, 6700-foot tunnel between Altamount and Aspen, Wyoming. The new tunnel is parallel to and a quarter-mile north of Union Pacific's 5941-foot single-track Aspen Tunnel, built nearly 50 years ago, during the Harriman regime. Completion of the new tunnel will eliminate the only stretch of single track on the UP between Omaha and Salt Lake City. The Aspen Tunnel will carry eastbound traffic, the new tunnel westbound traffic. Core-drilling and preliminary work on the new tunnel, which cuts through a spur of the Uintah Mountains, dividing the Green River and Bear River Drainage, are well advanced. The new tunnel, like the old, will cut through the 7660-foot mountain at an elevation of 7200 feet and at an 0.4 percent grade ascending westward. The project will take about two years to complete. Construction of the present Aspen Tunnel started in November, 1899, and was completed in October, 1901. Overhead clearance of the new tunnel will be 24 feet above top of rail with a maximum width of 18½ feet. Lined with reinforced concrete and steel, the tunnel will have elaborate drainage facilities and electric lighting throughout.

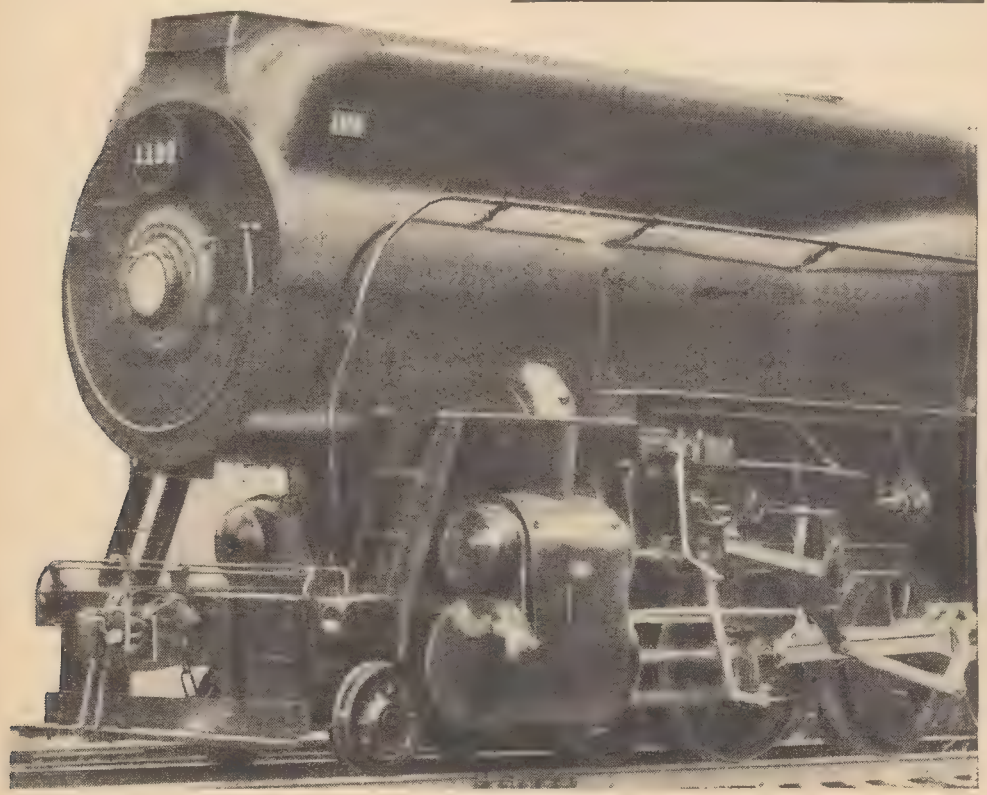
Locomotive of the Month:

N&W's Experimental Switcher

A STREAMLINED steam switcher is nothing new—Southern Pacific pretties up some old six-wheeled goats in the best *Daylight* traditions a number of years ago. But a coal-burning yard engine, outfitted for around-the-clock operation, with automatic fuel and water-control systems which demand no attention during stand-by periods, is something else again.

Down in the Roanoke yards of the Norfolk & Western such a locomotive is in daily service, under the careful scrutiny of a motive power department which for years has gone all out to prove that properly designed and maintained steam power can match the performance of any and all newcomers. The incentive does not stem from an aesthetic love of towering smoke plumes, flaying main rods, or thundering

Specifications:	
Number	1100
Cylinders	24 x 30
Drivers	56
Pressure	200
Weight on Drivers	239,530
Grate Area	45
Tractive Effort	52,457
Weight, Engine	279,530
Weight, Tender	212,000
Capacity, Tender	
Coal	20
Water	11,000



exhausts, but from the hard, cold fact that the N&W is the second largest soft coal carrying railroad in the United States. As such it has a zealous regard for the hand which feeds it.

A switcher, then, was an ideal subject for attention. You can count on the fingers of your two hands the number of domestic, steam-driven marshalling engines which were ordered by our railroads during 1946. Low availability, slow rate of acceleration in the lower speed ranges, smoke nuisance, and high overall operating costs —these are factors which have weighed heavily against such power in its losing battle with Diesel yard motors.

Because of the large number of steam switchers already in service, not only on the Norfolk & Western, but on other carriers throughout the country, it was

RAILROADS depending largely upon coal as a revenue commodity are watching with interest the performance of the 12-wheeler pictured on these pages before and after alterations. She is the Norfolk & Western's experimental switcher, designed for around-the-clock operation, through the application of a turbine-driven fan to control drafting, and automatic fuel and water-control systems

OPPOSITE PAGE (TOP): New smokebox, fan chamber and induced draft outlet show plainly in this crane operator's view of the 1100

OPPOSITE PAGE (BOTTOM): Air-flow cowl, shown during course of application eliminates unsightly protuberences, helps jet-cleaned exhaust to clear cab

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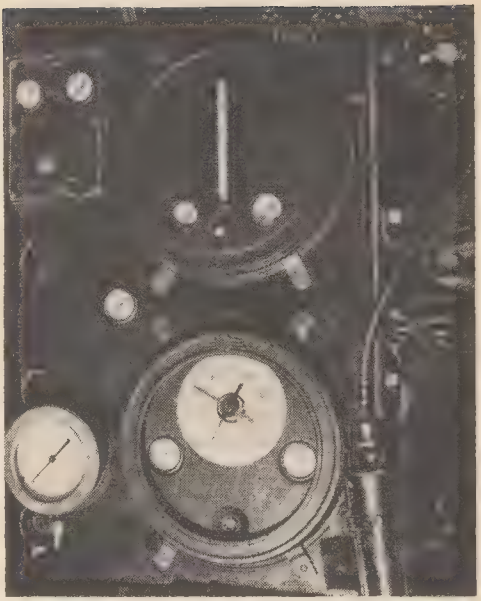
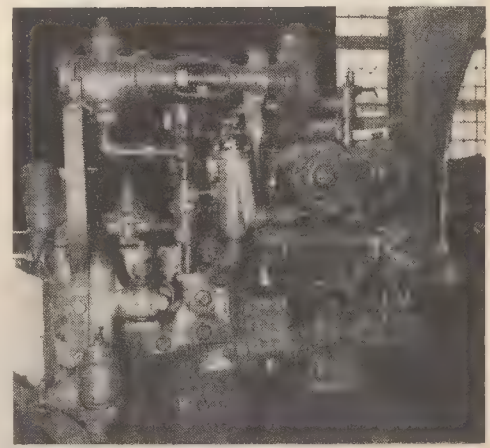
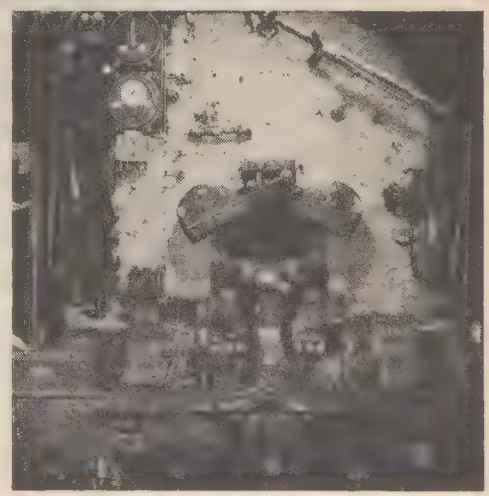
RIGHT (TOP): Control panel incorporates hand-automatic selector valve, fuel-air ratio control, and master steam pressure control

RIGHT (CENTER): Compact grouping of stoker engine, diaphragm-operated control valve, feedwater pump and injector

RIGHT (BOTTOM): Bailey-meter panel, controlling combustion, is above and to the left of firedoor



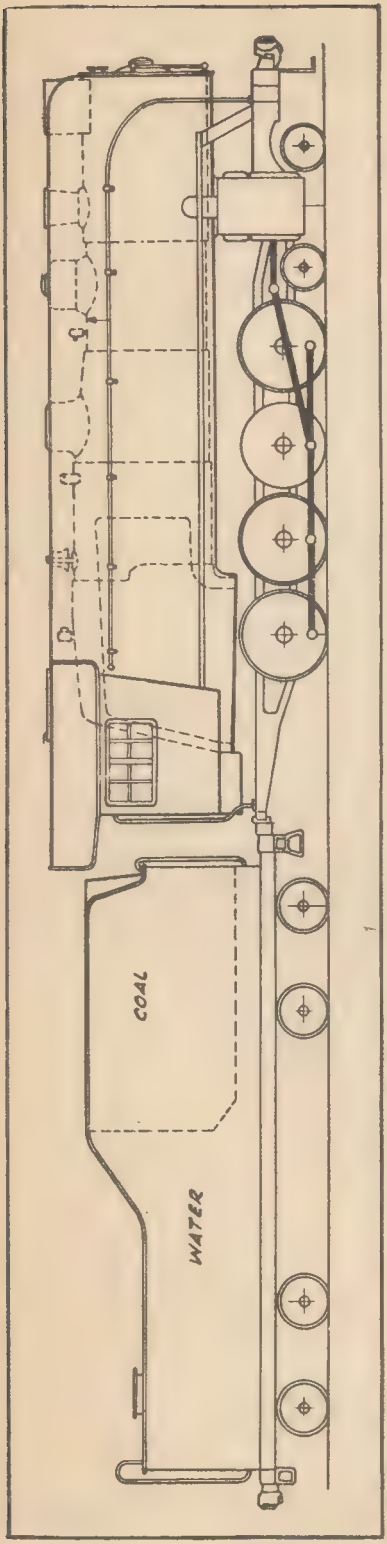




decided to conduct experiments on an existing locomotive, rather than on one built particularly for that purpose. This would prove conclusively whether or not alterations would be justified on the basis of improved performance.

Number 1100, a 4-8-0 or Twelve-wheeler type of the M-2 Class was selected for conversion. Built by Baldwin in 1910 she had 24x30-inch cylinders, 56-inch drivers, 45 square feet of grate area, 200 pounds' boiler pressure, and a tractive effort of 52,400 pounds. Her tractive effort is approximately the average for locomotives in switching and transfer service throughout the United States.

With the cooperation of the engineering department of the Standard Stoker Company, eight important changes were made in the design of the 1100, all work being done in the railroad's Roanoke Shops. These were: 1, the addition of a four foot long combustion chamber to the firebox, accomplished through a reduction in the length of the flues; 2, application of a stainless steel fan, driven by a turbine using live steam to provide induced draft; 3, diversion of the cylinder exhaust through a silencer directly to the atmosphere, materially reducing back pressure; 4, installation of automatic controls to



PROFILE drawing of the 1100, which measures 81 feet 2 inches between engine and tender pulling faces. The total engine wheel-base is 27 feet 10½ inches, that of the engine and tender combined, 70 feet. Height to the rim of the stack is 15 feet 7 inches

maintain boiler pressure, with a fixed range of air-to-coal ratio; 5, provision of standby devices which enable the engine to be left unattended for a comparatively long period of time and then to be made ready for service with full boiler pressure within a few minutes; 6, the application of a standard HT-1 stoker modified so that the gas ratio is extremely high to give smooth operation at very low rates; 7, use of overfire air jets to provide a clear exhaust; and 8, adoption of a tender having a capacity of 11,000 gallons of water (enough for eight hours' service) and twenty tons of coal (sufficient under ordinary operating conditions to last forty-eight hours).

In addition Hennessy lubricators, which use lateral axle play to deliver oil to wearing surfaces, were applied to all driving axles, and an injector has been installed, to return cinders collected in the smokebox to the firebox.

The apparatus governed by the boiler pressure drop, is ingenious. It consists of a main pressure controller actuated from boiler pressure which, through secondary controls, determines the volume of air flow to the firebox and the steam jets for coal distribution, as well as the stoker itself. Control of the speed of the stoker engine is obtained through a special hydraulic tachometer. While all of these devices operate in parallel, they are so adjusted that when the boiler pressure drops from a predetermined point the fan, stoker jets and stoker go into operation in that order. This assures a minimum of smoke at the stack.

The improvements just described make the 1100 available for service twenty-four hours a day, with the exception of the time required to fill the lubricators, clean the fire and refuel the tender. In addition the automatic controls free the fireman from a number of duties resulting in increased time for observing and calling signals. It is too early to predict how widely the new devices and modifications will be adopted by other railroads but N&W is well satisfied with the performance of the revamped twelve-wheeler.

All Aboard

By STEPHEN J. SCHMIEDL

FOR twenty-five years, Joseph Harley, piloted a small switch engine around the London yards. Often he visualized himself at the throttle of one of the London Midland Scottish iron monsters, speeding through towns and villages, burning up the shiny steel ribbons at a hundred miles an hour and better. But in all Joe's twenty-five years of railroading he never got to handle one of those giants.

Three years ago Joe did something about it. What he did almost resulted in a series of disastrous wrecks on the line. And his adventures certainly had devastating effects on Joe.

Shortly after the engineer made his decision, officials of the railroad were surprised and worried by the number of locomotives that were running wild. Unattended and always big ones, they were started from different locations outside the London station.

Fortunately, all of them were stopped before any real damage was done; though several times the escape was too close for comfort.

One engine of the Royal Scot class rolled a quarter of a mile until stopped only a few lengths from the main line, where a fast train was approaching. At their wits end, the brass hats finally called on Scotland Yard for assistance in tracking the culprit.

Investigation narrowed the suspects down to one man, Joe Harley. Hiding in the yards one day, they spotted Joe climbing down from his dinky switcher and up into the cab of a "Big Boy." Joe started it rolling and jumped clear. In moments the plain-clothesmen were down upon him. The detectives clamped handcuffs on him and marched him off to jail.

The magistrate viewed Joe as a bad order and had him switched into the big-house for repairs. This required exactly five years of his time.

Runaway Snowplow? It went *that* way . . .

Nostalgia

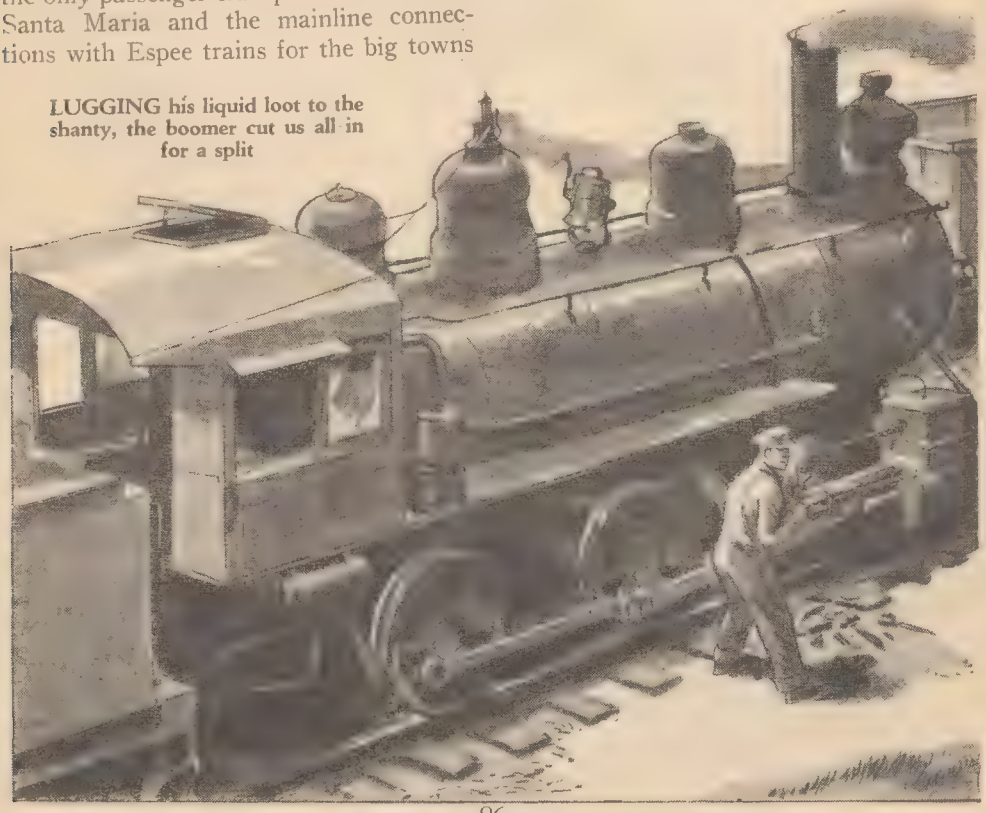
By HARRY K. McCLINTOCK

NOSTALGIA hit me when I perused Maxwell Swan's *Wanderlust* in the July, August, and September '45 issues of *Railroad*, and I'm still carrying the bruises, so to speak. Swan and I had some correspondence about Betteravia. The fact that each of us had ornamented a footboard at that obscure point intrigued us both. It was no port of call for boomer rails; I'll gamble a few *pesos* that no more than a handful of the itchy-footed fraternity ever heard of it.

It was, and is, located at the end of a three-mile branch of the Southern Pacific —the mainline end of said branch being a whistle stop named Guadaloupe. There was also a nine-mile branch of the narrow-gage Pacific Coast Railway which supplied the only passenger transportation between Santa Maria and the mainline connections with Espee trains for the big towns of Los Angeles and San Francisco.

I was picking up a scoop or two of beer in the H&H Bar in San Luis Obispo when the musical name of Betteravia first saluted my enraptured ears. H. H. Hunsacker, ex-Espee conductor and proprietor of the H&H, informed me that there was an office for a switchman at Betteravia and that a turn-around freight crew would leave for there at seven the next morning. It did—and I was on it.

One of the shacks on the turn-around was Charley Logwood, stinger griever at San Luis. He introduced me to Dick Hynes, engine foreman for the sugar factory, and I was working immediately. . . no application, no reference, no examination, and no watch. All of which was right

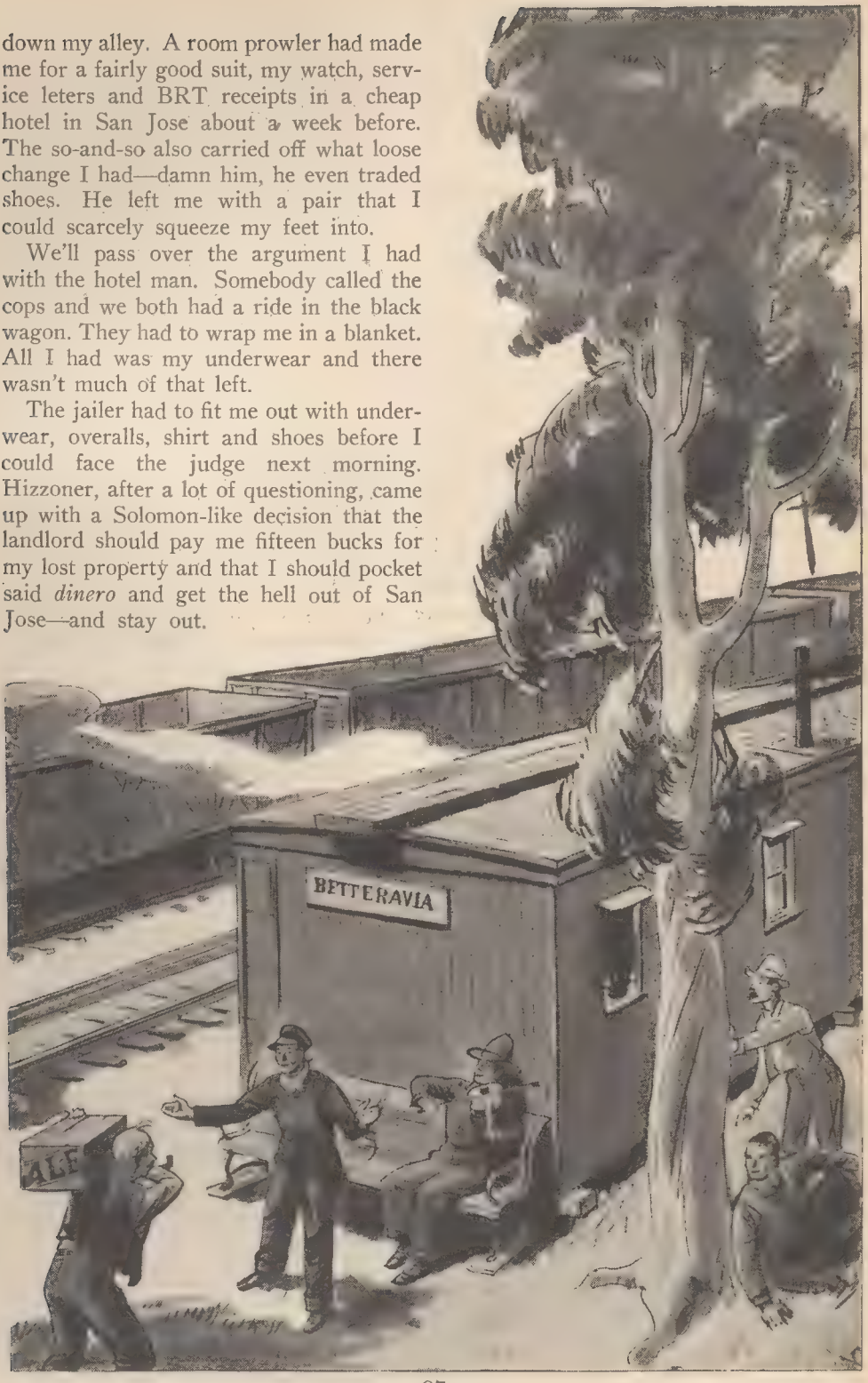


LUGGING his liquid loot to the shanty, the boomer cut us all in for a split

down my alley. A room prowler had made me for a fairly good suit, my watch, service leters and BRT receipts in a cheap hotel in San Jose about a week before. The so-and-so also carried off what loose change I had—damn him, he even traded shoes. He left me with a pair that I could scarcely squeeze my feet into.

We'll pass over the argument I had with the hotel man. Somebody called the cops and we both had a ride in the black wagon. They had to wrap me in a blanket. All I had was my underwear and there wasn't much of that left.

The jailer had to fit me out with underwear, overalls, shirt and shoes before I could face the judge next morning. Hizzoner, after a lot of questioning, came up with a Solomon-like decision that the landlord should pay me fifteen bucks for my lost property and that I should pocket said *dinero* and get the hell out of San Jose—and stay out.



Lacking Stinger credentials that would have opened some caboose door, I rode boxcars to San Luis Obispo and no observer could have picked me out from the rest of the bums.

Luckily I knew a couple of rails in San Luis. Also I had most of that fifteen bucks left and could front up with new khaki pants, a couple of decent looking shirts, a necktie and a pair of cheap "elk" shoes. The whole outfit set me back less than seven bucks, and good old Hunsacker staked me to a nearly new, fawn-colored Stetson that some absent-minded customer had forgotten when he left the H&H Bar. I was again clean and presentable. In the West at that time, if you wore a ten-dollar hat the rest of your clothes didn't matter.

So within twenty minutes of my arrival at Betteravia I was on the footboard of a switch engine and in my heart was that old comfortable feeling of being once more listed on a payroll, to say nothing of knowing where the evening biscuits and the comfortable flop were waiting.

The factory was owned by the Union Sugar Company and the yield of more than fifteen thousand acres of sugar beets was processed in a five-month campaign —the term by which the manufacturing season was known.

Union Sugar regularly leased an engine from the Espee and hired a crew consisting of engineer, fireman, engine foreman and one switchman to operate same.

Morning and evening we pulled the sugar house, dragging out four or five loads and spotting as many empties. One string of standard-gage beet racks arrived every morning with the Espee turnaround, and the Pacific Coast delivered an average of three trains of ten or twelve slim-gage, link-and-pin racks each day. Neither road delivered on Sunday. Sugar cars were weighed before and after each loading, but beet racks were weighed only when loaded.

Between short spasms of labor we had plenty of time to loaf around the stranded boxcar that served as an office for the Espee freight agent, and to keep one another up to date on the standing of major league ball clubs, the apparent trends in national politics and similar switch shanty topics. I had never dropped into a softer spot. For five months I never wore a coat—in fact, I didn't own one. For five months I never filled a lamp nor polished a globe. I don't believe that there were any lanterns or that any of the crew could have given valid testimony as to whether the acetylene headlights on the old 1040 would, or would not, operate. And not a single drop of rain fell.

The company-owned hotel served man-sized meals that were always well-cooked and appetizing. My room was as severe and simple as a monastic cell but it was clean as a pin and the single bed was as comfortable as any I ever slept in.

Betteravia, with its five-month tenure of office, was strictly a boomer job but the opening of each campaign saw at least one repeater on the crew of the switch engine

AND now, let us take up the matter of the weak drawbars in the slim-gage cars that seemed to pull out so easily and caused Maxwell Swan so much grief. I worked on the same job with the same hogger, spotting the same cars on the same scales and we didn't have five minutes' trouble in five months of weighing. But that was one year later.

The evidence would seem to indicate that Dick Hynes and I were better men than Dandy Jack Carroll and Maxwell Swan. We were—like hell. The answer to the $64 question was sitting right up in the engine cab, and his name was Lyle R. Gardner.

Gardner was young and he was ambitious. And, above all, he was highly intelligent. He had fired for a couple of months on the slim gage, which enabled him to hire out as an *experienced* tallowpot on the Espee. He stayed with that for almost two years while he devoted some of his spare time to memorizing damned near every word of the *Locomotive Catechism* and to mastering an ICS course on air brakes.

He wanted to sit on the right-hand side

of the cab and yank a throttle, to feel the surge of power as a big freight hog started a full-tonnage drag. He must have pictured himself on the sharp end of a gleaming streak of varnish, rocketing down through the night-darkened Salinas Valley with the clean white beam of the electric headlight like a shining sword ahead and the echoes of a mellow chime whistle bouncing back from the lonely hills.

Well, if he stayed where he was, it was going to be a long time before that happened. The Southern Pacific engines were all oil burners and twiddling the grease valve of one of those babies was lots softer than patting one on the fanny with a scoop shovel. As Swan pointed out, there were no boomer tallowpots in California.

Sizing up possibilities, it looked to Gardner as though it would be something like twelve of fourteen years before accumulated whiskers would move him across the cab. To a guy in the restless early twenties that sounded like a century, or at least a lifetime. He was young and blond and good-looking; he dressed well, danced well, plunked a mean mandolin, sang a pleasing tenor and was not one to be avoided by the ladies. He wanted to be a hogger while he still possessed all of those desirable qualifications. There must be some way to beat the game, Gardner resolved, before his joints began to creak and the capillary substance ceased to vegetate on his cranium.

Then, in the early spring of the year 1910, our hero skum a scheme, formulated a plan, or figured an angle. It might not work—but there was an even chance that it would. At least he could give it the earnest old college try.

One fine day in April, Mr. Lyle R. Gardner presented himself in the office of Mr. F. J. McCoy, at Betteravia. McCoy was also young. He was tall and lean and good-looking and he was the Big Boss, the superintendent.

Gardner applied for the job as hogger during the next campaign, which would start about June 1st.

"I am in engine service on the Southern Pacific, running out of San Luis Obispo," he stated. "I'd like a vacation from mainline work for a few months but can't afford to be idle for that length of time. Five months of straight daylight work on your switch engine would seem like a paid vacation to a lot of mainline men."

McCoy was a darned good guy. Besides he was looking at an applicant with a pleasing personality who was dressed in well-tailored clothes and whose language was as good as that of any college graduate. Gardner had made a sale.

"I'd like three or four weeks' notice when you need me," Gardner said. "I'll have to make my arrangements with the Southern Pacific."

The super agreed and Gardner rose, ready to bow out.

"Just one more favor," he smiled. "You'll want to ask the Espee about me, naturally. When you make your inquiries please do not let it be known that I intend to work here. That might make it impossible for me to get away."

"Leave it to me," said McCoy, as they shook hands. "Discretion is the word. Just leave your name and address with my secretary. And I'll look forward to seeing you when the campaign starts."

Now, by a curious coincidence, there was an eagle-eye named Ralph L. Gardner pulling freight and extra passenger out of San Luis at that time. For all I know he may be there yet. By an even more curious coincidence, Lyle R. Gardner somehow got his initials reversed when McCoy's secretary took his name. As far as the Union Sugar Company was concerned he was R. L. Gardner.

And it was about R. L. Gardner that McCoy discreetly inquired. The replies had to be highly satisfactory. This Gardner was a hogger with whiskers enough to haul manifest freight and extra passenger, and his record was a clean as a Dutch girl's apron.

When the fire was lit under the boilers of Betteravia's sugar factory Lyle R. Gardner was there. And when the rented switch engine coupled into the first string of loaded beet racks the seat of his overalls

YOUNG Gardner had never run an engine more than twenty feet, so it was no wonder he couldn't spot cars on a scale

was planted firmly on the coveted cushion on the right side of the cab.

He had the job all right, but he was a long way from being a hogger; and nobody knew it half as well as he did. He had never run a locomotive more than twenty feet in his life and he must have been so nervous it's no wonder he couldn't spot cars on a scale. Maxwell Swan was just a trifle shy on yard experience at the time and blamed himself for the trouble. But I'll bet all the chilis in Tampico that Jack Carroll knew the score in one move. Swan says:

"Carroll had to show me. At first he took it easy, but he overran the scale as I had done in the beginning. . . Carroll began to cut them on a closer margin of time. He was chopping them merrily when—*whang!* went a drawbar."

So Carroll handed the job right back to Swan, knowing that neither he nor anyone else could spot cars with that kind of engine handling. In a big mainline yard, with the pressure high and a yardmaster riding his tail. Carroll would probably have demanded an immediate showdown. Where the boxcars are thick the work of one crew is tied into the work of every other crew in the yard. Delays are dynamite.

But at Betteravia you had more time than anything else. A delay might beat you out of a little spot, but that was all.

Carroll, realizing that Swan didn't know the score, let it ride. And Gardner learned to run a locomotive.

He finished the campaign and, before the service letters were made out, he corrected that little matter of the reversed initials. He also arranged for a return engagement next season.

With an enviable wardrobe and a comfortable supply of folding money he landed in San Francisco, after a free ride from San Luis, and hit the Espee for a job running a switch engine. He was willing to go anywhere on the system, and his service letter was as authentic as a Government bond, even if it did show no more than five months' experience. The traveling grunt, or somebody, put him through an examination and found he knew more answers than the guy who wrote the book. That pleasing personality hadn't wilted either.

Previously, the Espee had hired hoggers for the night goat at Dunsmuir but none of them stayed long. Dunsmuir is up on the Shasta Division among the towering peaks of the Siskiyous. In the winter time it gets colder than a well-digger's feet and the snow is belly-deep to a giraffe. Most boomer hoggers who hit California in those days were hunting sunshine and oranges and wanted no part of blizzards and snowballs.

Gardner lit in Dunsmuir around November first. He was fairly proficient as a yard hogger and was handling the same kind of calliope he had pushed around at Betteravia. He was eager to learn and he got by easily. Assured of a job at the sugar factory for the next campaign, he worked out a ten-day notice late in April and figured on a month or so among the bright lights of San Francisco before showing up among the beets.

But he wasted little time in dalliance on Powell Street. The Santa Fe was hiring an occasional hogger at Richmond, across the bay. So to Richmond he went.

He now had three service letters; one showing a couple of years as a fireman and two others showing a total of something like ten months as a hogger. Hard study, plus whatever coaching he could pick up, had given him a thorough knowledge of that old Bible in which are set forth the Standard Rules for the operation of trains. He hadn't forgotten a word of the *Locomotive Catechism,* either.

He made a good impression on the Santa Fe super. "I'd like to hire you," that worthy said, "but things are pretty slow now. Come back next fall and we'll see what we can do."

"Hire me now," Gardner suggested. "Let's see if I can pass your examinations. I can go back to the sugar factory for another five months and by that time you may need me."

He passed all tests with flying colors, made a trip to establish his seniority date on the engineers' board, and took a leave of absence until the following October. By the time the sugar campaign had ended he could do all right on the extra board of the Santa Fe. He did so well, in fact, that he stayed right there until he passed away about ten years ago. His son is running a locomotive on the same division now.

WHEN I gave Gardner a come-ahead token and latched onto the first string of beet racks, he was an entirely different guy from the earnest amateur Maxwell Swan worked with. He had learned the old hogger's trick of placing rock landmarks right under the cab window and one carlength apart. Since the beet racks were all the same length, he could have spotted the whole string without any signals—just shoving ahead one carlength when he heard the weighmaster's gong.

Gardner and I were pals, on the job and off. He had a mandolin and he borrowed, for my use, a guitar that belonged to the manager of the company store. It was of Spanish make, said to be more than a hundred years old, and had a tone like an angel's harp. I fell in love with that instrument but it was not for sale at any price. About the only way I could acquire title was to marry into the family. Anyhow, I played it for five months.

Our concerts were usually staged at

Gardner's house. He had married a San Luis girl since his other season at Betteravia and they had a cute little bungalow in Married Men's Row. Sometimes we put on a sing-song in the lobby of the company hotel and, augmented by a fiddler and another guitar player, we played several dances at Orcutt, a neighboring village that was right in the middle of a new oil field.

Yes, Betteravia was a mightly pleasant spot. But the story of my sojourn there would not be complete without an account of the advent and the hasty departure of Arnica Jack.

Arnica Jack was an ancient and dissolute switchman, a contemporary of such legendary figures as Circus Doyle, Heehaw Mike, Red Shirt MaCarty and Stew McGraw. None of these worthies ever bothered the eastern railroads to any degree whatever. All of them worked, at times, in Chicago and all of them had spent at least one season on the Iron Range of Minnesota. They worked for Jim Hill when the wheat was moving out of the Dakotas and made the cane rush in Louisiana. But they were essentially western boomers.

Arnica Jack went them one better—he never got off the Pacific Coast. He had some kind of an in with General Superintendent Buckley of the OWR&N and with Fred Salters who held the same office with the Southern Pacific at San Francisco. Both of those fine gentlemen had a soft spot in their hearts for even the most worthless and irresponsible boomers. Arnica Jack, a good carhand when he wanted to be, was congenitally about as worthless and irresponsible as any man who ever hit a footboard.

No one will ever know how many times his friends squared the records to fix that old reprobate up with a good job. The fact that he invariably blew up within a short time didn't seem to make any difference.

He had worked under so many flags that I don't believe anyone knew his real name. The monicker of Arnica Jack was conferred on him because legend had it that, while sojourning at the old SP hospital on Valencia Street in San Francisco, he developed a raging thirst, drank a bottle of that soothing liniment, and wrecked the joint.

He showed up at Betteravia a little too late to get the job I landed. He had known about it and had started from San Francisco in time, but was delayed somewhere along the line. I had been working for two weeks when he finally showed up.

Not wishing to see the ancient boomer leave town without a road stake, Dick Hynes lined him up a job on the odd labor gang. On the positive assurance that as far as he, Arnica Jack, was concerned there woudn't be much labor to it, the position was accepted.

The principal assignment of the odd labor gang was the collection and disposal of rubbish and general policing up around the plant. Arnica Jack's first appearance was as custodian and motive power of a capacious wheelbarrow—plus broom and shovel. His beat was in what might be termed the civic center of Betteravia; that is, a dusty area in front of the big company-owned general store, said area bounded on the south by the railroad tracks and the sugar factory.

Inside of a week Arnica knew everybody in town. He declined to regard himself as a laborer in charge of a wheelbarrow. "I am," he orated, "the chief engineer and propulsion expert of Betteravia's only Hinkelbinder." This usually produced a puzzled look on the face of his auditor. Then the old boy would elaborate.

"The Hinklebinder is the most wonderful machine ever invented by man!" he would declaim. "What other vehicle has two go-ahead levers and no reverse? It operates without brakes and can be turned in its own length, it requires neither fuel nor water and needs neither headlight nor redlight.

According to Arnica Jack it was the Hinkelbinder that taught the Irish to walk on their hind legs. In his book, nothing more important had ever happened to the human race. "Can you imagine a cop or a politician galloping around on all fours?"

he would demand. "And who but the Irish is it that runs our cities? If it wasn't for the Irish, New York would be a vacant lot, Chicago an Indian trading post and the Statue of Liberty would be stuck up for a cigar lighter in somebody's saloon!"

It wasn't long before Arnica was the best known citizen in the village and his wisecracks were passed around Betteravia like those of the acid Wilson Mizner on the Broadway of that day.

Then, presently, he was promoted. Instead of pushing the lowly Hinkelbinder he was placed in complete charge of a pair of fat and placid mules with rubbish wagon attached. This outfit promptly became a "Missouri compound with a simple engineer," and the guy who invented mules and the other unsung hero who first harnessed a pair of them began to rank pretty close to the anonymous inventor of the Hinkelbinder.

The rubbish dump was down in the bottom of an adjacent canyon and Arnica Jack would give any listener a thrilling account of the way he had to nurse his air, even with the retainers up, on the down grade. To get out again, he claimed he had to kick the Johnson bar right down into the forward corner and cut in the booster. There were times when the outfit almost stalled and he thought he might have to double the hill, which would have involved a claim for extra mileage. But the judicious application of a barrel stave always evoked the necessary added effort from the Missouri compound and he never actually died on the hill.

Arnica Jack was about as homely a specimen as you could well imagine. He must have been a notch or two past sixty, his scanty crop of hair was a nondescript color between off-white and sandy and old John Barleycorn had painted his schnozzle a rich crimson plentifully veined with purple. Yet the ladies, married or single, always had a smile and a pleasant word for him.

Young and old, he flattered them outrageously. He never failed to notice a new hat or a fresh summer frock; to hear Arnica tell it, they were invariably becoming. The line paid off, too. When he made his weekly collection of accumulated rubbish from the rear of the cottages in Married Men's Row, there wasn't a housewife that didn't have a tempting sandwich or a bottle of cold beer waiting for him.

Betteravia had a comfortable clubhouse where the unmarried officials lived on the fat of the land. Their beef, pork, lamb and veal was no better than we got at the company hotel; it was all raised and slaughtered right on the company's own rancho. But they drank the most mellow of whiskies and their beer was the best that Milwaukee and St. Lous produced. The officers' ale was shipped all the way from storied Portsmouth, where New England brewers worked to prove that old England had nothing on them.

Arnica Jack set himself in solidly with the steward of this club, so solidly that he probably did more drinking there than any two of the official family who also ate and slept on the premises. I'll never know how he worked the angle but he got away with a whole case of that marvelous brew on several occasions. Running true to form as an old boomer, he lugged his loot over to the switch shanty and declared us all in for a spilt. Even Lyle Gardner, abstemious as railroaders generally come, was willing to forget his scruples and down a bottle or two.

It was some time in August of 1911 that an organizer for the Loyal Order of Moose showed up in Betteravia. Lodge Number 719 was being organized in Santa Maria, the charter was still open and the initiation fee was attractively low. Something like twenty-five employes of the Union Sugar Company signed applications and among them was Arnica Jack. He didn't give any reason to the organizer but, to the rest of us, he confided "I'm a cinch to be on the bum next winter, so I might as well have a begging license. If this outfit is taking in anything like the number of members that the organizer claims, I can mooch for at least two weeks in any town in California.

"How well I remember," he continued, "when the Fraternal Order of Eagles was

spreading like a prairie fire on this West Coast! You could walk into any barroom in the Golden State with the reasonable assurance that the white-jacketed gent behind the plank was a brother; and there never was a drinkin' man that was stingy with somebody else's liquor. Brother," he reminisced, "I kept myself in a comfortable glow for dam' near two years on that Eagle's card."

THE Moose Lodge put on a special daylight initiation for the sugar factory employes who were on the night shift but about a dozen of us, including Arnica Jack, were obligated at a regular meeting. We hired about all the rigs in the company barn to get to Santa Maria and back. The induction ceremony was beautiful and impressive; but after the Lodge had been closed in due form, we new members adjourned to a nearby saloon to see if the flowing bowl was still flowing. Consequently, it was long after midnight when the last of the rigs checked in at the Betteravia barn.

I made an immediate dive for the hay but Arnica and five or six of the newly-antlered ones who had brought sundry bottles along from Santa Maria were in the mood for wassail. They held forth in the lounge of the joint and, since the bedrooms were on the upper floor, their prolonged hilarity might have been overlooked but for one final touch.

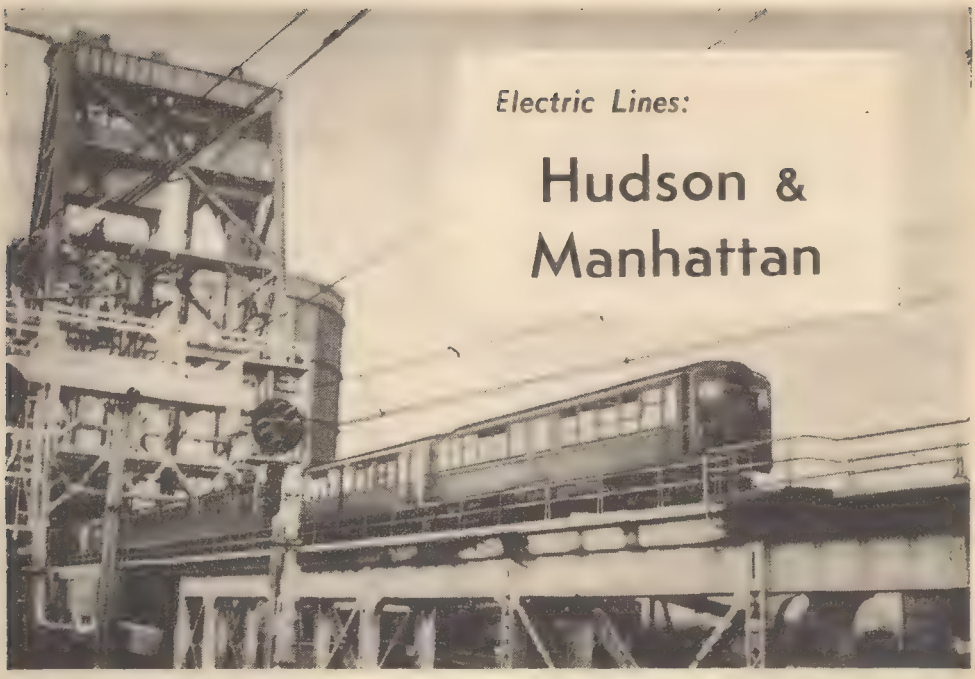
The manager of the hotel was an elderly gentleman of considerable ability and tremendous dignity. His name was Grey but he was usually referred to as Lord Grey The rest of the staff, from the *chef de cuisine* to the humblest flunky, were Japanese. At five o'clock each morning a Jap boy would make a tour of the hallways of the upper floor. Hammering enthusiastically on a metal triangle, he'd arouse the guys on the day shift, who had just one hour to dress, eat breakfast and get on the job.

On this auspicious morning the Jap had company. When he made his tour of the halls, he was followed by a procession of inebriates armed with the handy conveniences found under beds in those days. Arnica Jack demonstrated that, by holding the receptacle in one hand and the lid in the other, a clashing could be produced like that of cymbals. The clamor aroused everybody in the joint, including Lord Grey who, with his good wife, occupied a separate wing.

All of the rest of the celebrants heard the angry manager coming and did a quick duck. Only the old boomer continued to follow the Jap. He still clashed his china cymbals when the outraged manager arrived. So Arnica Jack had to take the rap. Lord Gray reported him to Superintendent McCoy.

WE ran old Arnica down the branch to Guadeloupe that afternoon. We shook hands with him and wished him luck. Then we climbed back onto the little old 1040, Gardner eased the throttle open and she chuffed away. Looking back we could see the old boomer, a lonely and somehow pathetic figure, all by himself on the windy platform of a whistle-stop station.

We didn't have much to say to each other on the short run back to Betteravia and its sugar beets. I guess we were all mulling over the same thought. None of us believed we would ever see that ancient sot again—and I don't think that any of us ever did. He was a relic of the link-and-pin and handbrake era, a remnant of the rollicking, reckless crews that manned the railroads when railroading was about the toughest game in the country. For him, and for his kind, the end of the line was just around the next curve.



Electric Lines:

Hudson & Manhattan

First Rail Link Between New Jersey and Manhattan Has No Substitutes

THE value of the Hudson & Manhattan Railroad's direct connections in providing passenger transportation between New York City, Jersey City, Hoboken and Newark, N. J., has, in the past, been underestimated. But the passenger traffic snarl that developed during the prolonged strike of employes on the H&M last year gave mute evidence to the worth of this third-rail transit line to commuters and incoming steam road passengers as well.

Not too many of us can readily recall the days before rails were laid under the Hudson River, when puffing ferry boats were the only means of communication between New Jersey and New York City. Many of them still weave a maze of paths across the wide river today, but since the opening of the Hudson Tunnels for H&M cars and, later, the Pennsylvania Railroad tunnel, their importance as a connecting link has steadily diminished.

The story of the *tubes,* as H&M is most frequently called to distinguish it from the land-bound subways of New York City's metropolitan area, dates back to 1874, when an English firm began construction of a tunnel between Hoboken, N. J. and Morton Street, New York City, just across the Hudson River. The idea was conceived by D. C. Haskins, a New York engineer, and the original plan was to run steam trains from Hoboken to a terminal near Washington Square. But, in 1880, when the construction firm failed, work came to a halt, with 1200 feet of tunnel dug under the river.

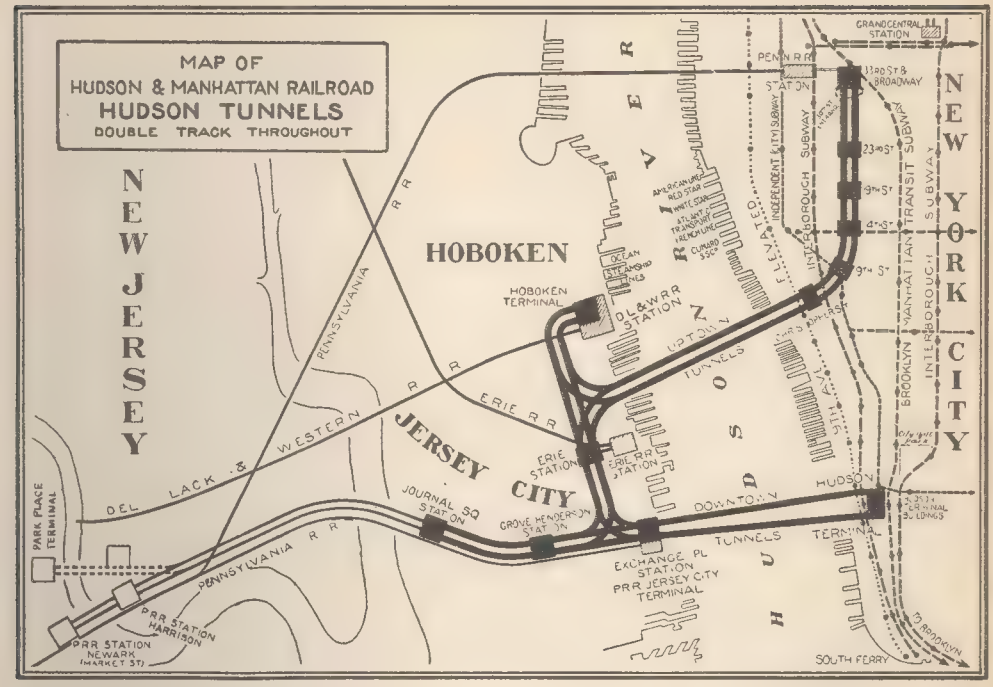
Eight years later, more British capital poured in and construction was resumed. The firm of Pearson & Son, completed 3000 feet of brick-lined tunnel, giving the first direct communication other than by water between New Jersey and New York. But this new company, too, failed, and the project lay idle until 1901, when William G. McAdoo, later to become a prominent statesman and then practicing

law in New York City, organized the Hudson Company. This corporation eventually carried out the construction of the underground network of tracks connecting New Jersey's important railroad terminals with New York City by means of two sets of tunnels, one running from Hoboken to Morton Street, New York City; the other from Exchange Place, Jersey City to Cortlandt Street, New York City.

The original plans did not contemplate the present important link with Newark, N. J., eight miles west of New York, via trackage rights over the Pennsylvania Railroad across the open meadows that stretch for several miles between Jersey City and Newark. The electric line was first intended to be a connection point for the important railroads whose tracks could reach no closer to New York than the Jersey shores. This the H&M actually accomplished: it connected the Lackawanna, Erie and Pennsylvania Railroads with downtown and midtown Manhattan, supplanting in part the then-existing ferry service.

The two tunnels across from Hoboken were completed by the new company and made ready for train service early in 1908. Ninety-seven feet below the surface of the Hudson River, they were 5650 feet long. Work on the other tunnels from Exchange Place to Cortlandt Street, in downtown New York, began in January, 1906, and was completed in July, 1909, 3½ years later.

On the New York side of the river, plans called for the line to run underground along Sixth Avenue, in a northerly direction, and reach 33rd Street, the present H&M terminal. Although the present Pennsylvania Station was not erected at this date, construction of the Pennsylvania tunnels was progressing, and 33rd Street was already a prominent business center; so much so that in 1909, it was proposed to extend the line to Grand Central station, and this plan came very near being undertaken. But a drawback appeared in the form of the Interborough Rapid Transit's plan to extend their subway down Seventh Avenue to make a similar connection. As useful as a direct entrance to Grand Central Station via H&M would appear in today's light,



the builders of the line did not want to expend any more money at the time, and with the threatened IRT extension, decided not to take the risk.

OPERATION of the first cars on the H&M commenced on February 25, 1908. The line started from Hoboken and ran under the Hudson River and up Sixth Avenue to 19th Street, New York, as far as it was then completed, a distance totaling about three miles. Some of the equipment used on the first train is still in service today, running on the *uptown* route. The original cars were 37-ton steel motor cars, with doors at both ends and in the center. There were, and still are, no steps; as all stations are equipped for floor-level loading. Current is 600-volt D.C. and is collected from an outside third rail of

MAP of the Hudson tunnels showing railroad connections in New York and New Jersey

CLOSE-UP of Car 392, *left*, at Journal Square station. Arched windows and deep green color identify it as a 33rd Street uptown local car

ADVERTISEMENT is a landmark in Jersey City, pointing way to Journal Square station and adjacent bus terminal. Underneath bridge is H&M switching yard

HUDSON & MANHATTAN R R CO
SHORTEST TIME - MOST FREQUENT SERVICE - LOWEST RATE
JOURNAL SQUARE TO NEW YORK CITY
TO HUDSON TERMINAL 3 MINUTES 3 MINUTES
TO 33rd ST & 6th AVE 20 MINUTES 3 MINUTES
UNITED STATES

standard design. A power station built for the company and equipped with two 6000-kw. and two 3000-kw. vertical Curtis turbines, supplied power until several years ago, when arrangements were made with New York Edison Co. to take over the station and sell power to the railway line.

Service in New York was extended to 23rd Street on June 15, 1908; and the following year, July 19th, with tunnels across to downtown New York, service began between Cortlandt Street and Exchange Place, Jersey City, where the Pennsylvania Railroad's Exchange Place was located. Rail connection between the two lines was made on August 2, 1909, and the Erie Railroad station midway between was opened. The effect of thru traffic between Cortlandt Street, in the heart of downtown New York's business section, and the PRR, Erie and DL&W terminal, was immediate. From an average of 32,000 passengers daily in the summer of 1909, traffic grew to a record 130,000 passengers daily.

The last extension made in New York was completed on November 10, 1910. On that day trains first ran into the terminal at 33rd Street. This is the same location as the present terminal of the H&M in uptown New York, although a complete renovating job was done on it just prior to World War II.

As of 1910, the H&M became an underground line entirely. The only time that cars ever saw daylight was when they pulled into the street-level yard just beyond the Exchange Place station, in Jersey City. But McAdoo and his associates in the Hudson Company, the controllers of the H&M line, had other plans for expansion. The Pennsylvania Railroad, with a modern terminal at 33rd Street, had no downtown New York terminal, a fact which gave H&M the opportunity to provide this service for the PRR, while adding to their own passenger income.

As a result, the PRR equipped their tracks across the meadowland into Jersey City with third rail for use by H&M trains. This ran from Manhattan Transfer, since removed but once a busy exchange spot for passengers to downtown New York, until completion of a new station at Newark in 1938. For the operation of this new downtown service, the H&M purchased thirty-six new cars of somewhat different design from the standard H&M type and considerably faster, while the PRR added sixty cars almost identical to the new H&M equipment and for use interchangably.

At the same time the H&M constructed elevated track from Manhattan Transfer into Newark, N. J. The route ended at Park Place station, just north of downtown Newark, and about a mile from the PRR station in that city.

Service over the PRR tracks from Manhattan Transfer into Jersey City and back to New York began on October 1, 1911. Simultaneously the PRR discontinued its steam train shuttle service between Manhattan Transfer and Jersey City, where passengers had to change for the ferry boat trip across the river to New York. The advantage of the electric service from the Transfer right into the heart of Manhattan cannot be overestimated.

With the extension of H&M trains into their own terminal at Park Place, Newark, N. J., two months later, PRR eliminated eighteen Waverly local trains, all of which were replaced by the electrics.

H&M has operated over the same trackage since 1911. The floor-level cars speeding across the open track between Newark and Jersey City, and rushing in and out of the terminals in New York and at Hoboken, have become an institution in the Manhattan area. In conjunction with the Pennsylvania Railroad, they provide the only direct rail service into downtown New York. Running time from Newark into Cortlandt Street Terminal in New York was, and still is, twenty minutes.

The only change in track of recent years was brought about by the construction of the new, modern PRR station at Newark in 1938. The upper platforms in the new station provided space for incoming and outgoing *tube* trains, supplanting the old Manhattan Transfer station which was torn down following opening of the mod-

ern Newark depot. All changes from PRR trains bound for the uptown, New York terminal at 33rd Street, and for passengers bound for downtown New York, are now made at Newark, N. J., via the H&M connecting cars.

Track electrified for third rail H&M cars extends beyond Newark station to South Street station, about a mile west along the main line. The H&M cars are stored here and track is used for shifting trains preparatory to making the return trip to New York. The plan had been to extend tube service to South Street, Newark, within a period of several years after service to Newark was begun and certain agreements were entered into with the city, providing for the future extension. However, at present it does not appear that density of traffic would justify such an extension and, even now, with the City seeking to enforce the agreement, H&M is refusing on the ground that traffic would not warrant the service.

TODAY five routes are operated on the H&M line. The speedy, maroon-colored cars bought for Newark service are used solely on that run—which is from Newark to Jersey City and on under the Hudson River into Cortlandt Street, New York, the downtown terminal. The older group of cars, with dark green paint and curved windows, are in use on the remaining four runs: Jersey City to downtown New York; Hoboken to downtown New York; Hoboken to uptown New York and Jersey City to uptown New York. Since a glance at a map will readily show a complicated track layout, the actual routing of the trains is a little confusing to a stranger. But for daily commuters' service, it has proved the most efficient and expeditious means of handling the traffic.

Headway of trains on the Newark line is six minutes in busy hours, and ten minutes at other hours until midnight. On the other run headways vary from three minutes during rush hours, to five and ten minutes at other times. In the wee hours

JOURNAL SQUARE yards with station in background and PRR freight track to Cone Yards at right. Inbound train from Newark in left foreground

LEAD CAR shows similarity of PRR interchangeable equipment to H&M cars in rear. This six-car train was snapped on the Pennsy mainline at Harrison, N. J.

of the morning, when there are only two runs, an unusual routing of trains takes place. The train from Jersey City (Journal Square Sta.) to downtown New York runs as usual, but the uptown train out of Jersey City first runs into the Hoboken terminal, then backs out and takes the turn to uptown New York. In this way, the uptown train serves three of the daytime routes.

Speeds on the underground portions of the tubes are on a par with those other subway systems, but on the open track between Journal Square, Jersey City and Harrison, just across the Passaic River from Newark, N. J., cars maintain a steady sixty m.p.h. They operate on this open track with Pennsylvania trains on the next adjoining rail, while for a considerable portion Delaware, Lackawanna & Western steam and electric trains pass only a hundred feet or so away. Not infrequently, trains of these roads race beside each other across the open meadowland, and so equal is their running speed, that neither pulls away from the other for the entire distance that their tracks run close together.

Block signal protection along the track has meant few rear-end collisions on the H&M. The feature responsible for the few accidents that do happen, is the sharp curves on which switches are located. Every so often a switch will turn, or wheel raise over the flange as a train moves into the Cortlandt Street terminal, and there occurs a relatively undangerous derailment with passengers thrown about in the car.

The worst accident on the H&M occurred only four years ago at Exchange Place station in downtown Jersey City. A train traveling at a good rate of speed as it neared the underground station, crossed over the switch located at one end of the station platform on a slight curve, lifted off the rail and jammed itself against the platform. All six cars were thrown about and the station set afire. There were several fatalities with hundreds of passengers injured in this freak accident. Since that time slow speeds over switches have been an enforced rule of the road.

H&M has maintained a fine, safely operated line during its 39 years of service, yet the story must be told of a near-calamity occurring only two years ago on the track leading to the drawbridge just east of the Newark station. A seven-car rush-hour train bound for Newark with nearly 1000 passengers aboard ran through a stop signal as it approached the

high-level Newark drawbridge, and rolled on toward the open bridge without stopping. By a split second the lowering draw blocked the head end of the first car on the brink of the yawning gap leading to the river directly ahead. The train stopped *dead* in its tracks. The motorman and a trainman were killed and almost one hundred passengers injured; but what the result would have been had the bridge not started down just when it did, one can only imagine.

IN RECENT years, the line has not been blessed with over-pleasant employe relations. Claiming that absence of lucrative freight business put them in a separate class and pointing to low profits from passenger service the operators refused to give pay raises at the same rates as the steam roads. Ten years ago, when the I.C.C. sought to bring the line under the Railroad Retirement Act, the H&M claimed it was an *interurban* line and therefore exempt from the provisions. The Supreme Court ruled otherwise, and gave H&M employes the same rights as other railroad men. Then, following the national railroad strike of 1946, H&M claimed it could not afford to raise its workers' rate. Consequently, the men stayed on strike for an extra month, during which time 100,000 daily commuters were forced to seek a substitute for H&M service.

The nearest solution to the resultant passenger traffic jam, and one which was mighty unpopular with H&M employes, was the reinstallation, by means of Pennsy MU cars, of the old Waverly local service between Newark and the Jersey City PRR ferries. A regular shuttle service on the Newark-Jersey City run was installed, passengers changing to the ferries at the Exchange Place terminal across the river from New York, where the PRR still carries on an infrequent ferry service. For the duration of the H&M strike this ferry service was speeded up and the PRR trainmen who worked on the extra Newark-Jersey City trains were called none-too-pleasant names by the striking H&M workers.

In an effort to better the road financially, fares have steadily been increased, from the original five cents to the present ten-cent fare (eleven token for a dollar) for the interstate trip under the Hudson River. But local fares remain at a straight five cents. Fares on the Newark run conform to standard steam-road rates.

The Hudson & Manhattan line is in a class by itself; it's not an interurban, not a trolley line, not a steam road. On the Newark run it has the characteristics of an electrified railroad, but once it dives into the tunnel east of the Journal Square station, it becomes a subway line, and on the whole eastern portion is an underground electric—nothing else.

A bitterly-fought battle for control of the tube line took place recently. A group of stockholders organized a rebellion against those who had controlled the line in April, and in a special election, the former group won out. However, the court ruled the election illegal and a second vote, taken in July, resulted in the old management group retaining their hold on the policies of the company.

The brotherhoods took no active steps

DOUBLE CIRCLE: H&M insignia emphasizes importance of inter-state travel

in the campaign, but did indicate their preference for the rebel group, as against the incumbents. Regardless of the final outcome of the strife between the various factions interested in the H&M, the tube cars will continue to roll. Without them, hundreds of thousands of New Jersey's commuters would be pushed back into the Nineteenth Century days when their sole means of entry into New York was via the slow ferries plying back and forth across the Hudson River.

As long as railroads exist, the H&M cars will carry on their vital work of transporting passengers across the Hudson River into New York, from New Jersey's waterfront railroad terminals.

Car Barn Comments

Steve Maguire

THE FUTURE of transportation in Birmingham, Ala., "The Pittsburgh of the South", has been decided by the Birmingham Electric Company, operator of bus and rail lines in the great industrial city. Birmingham Electric, now the operator of a 125-mile railway system, together with extensive bus routes, will retain the electric cars on its heavily-traveled city and suburban runs, but will use trolley buses and gas buses on the rest of the system.

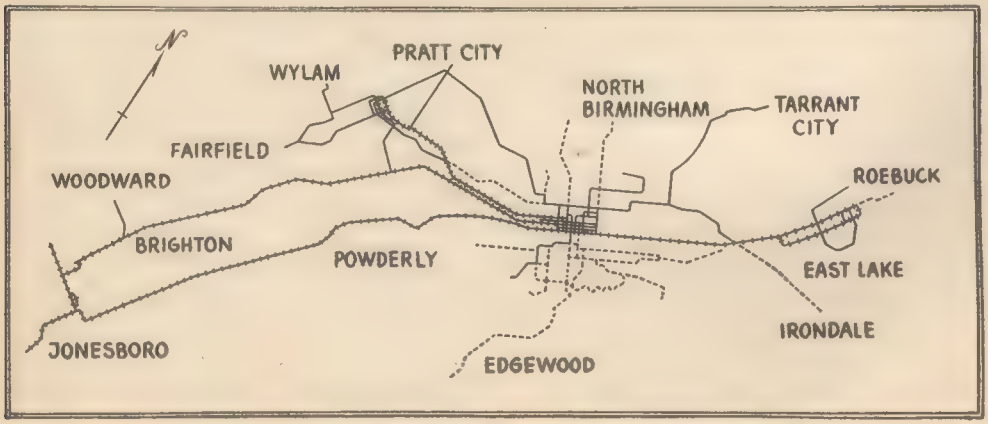
First PCC cars in the South were recently placed in service in the city and are operating on two of the routes that eventually will be served entirely by the modern streamliners.

Here is the BEC plan, as reported to us by Stanley D. Crews, Lawrenceburg Hotel, Lawrenceburg, Tenn.: PCC cars will be used on the South Bessemer, North Bessemer, West End-East Lake, Ensley-South East Lake and Travellick lines. These routes are the most heavily traveled in the city, will comprise the rail lines in the future.

Trolley buses will replace streetcars on the Vinesville, Ensley-Fairfield, Pratt-Ensley, Wylam-Bush Hills, Woodlawn and Boyles-Tarrant City lines, with gas buses replacing the Pratt City Shuttle, Fairfield Shuttle, Rugby Shuttle and Woodward Shuttle railway lines.

The first step in converting a part of the lines was made this year, when the Edgewood suburban line, the last railway route going south from the city, was bussed. From a trackage of nearly 200 miles, the BEC rail lines have dwindled to the present 125 miles of streetcar track in the past fifteen years. When the entire plan is carried out, Birmingham will have only one-half of its former line mileage.

***BEC's* lines from the heart of the Steel City to surrounding suburbs**



EDGEWOOD LINE, Birmingham Electric Co., has been abandoned to buses. Here 288 and 284 are passing on private right-of-way

During the past war, Birmingham was the South's busiest industrial city. To provide for the heavy traffic taxing its transportation system to the utmost, the BEC made extensive purchases of second-hand railway equipment. In addition to an assorted group of railway cars that included birneys and big, steel center-door interurbans, they bought cars from Springfield, Mass.; Houston, Texas; Lorain, Ohio; Alliance, Ohio; Wheeling, W. Va.; Toledo, Ohio and Eastern Massachusetts St. Ry. All of these cars were remodeled with center doors installed and "Jim Crow" interiors.

* * *

GOOD NEWS from the South indicates that maybe you'd better not sell the St. Petersburg, Fla. trolleys short. Since the municipal operators originally brought out their plan for a change to buses, GM has failed to make delivery and orders for the new noxious vehicles have been cancelled.

Tom Norwalk, News Room, *St. Petersburg Times,* advises us that the newly-elected council appears favorably inclined toward the idea of installing new, modern PCC streamliners. At any rate, the whole matter of local transportation is being given another thought.

Only recently, when Comdr. Quinby, ERA President, was interviewed by a *Times* reporter, he pointed out the horrible transportation muddle Miami got into when cars were taken off for buses. The complaints of Miamians riding slow, overcrowded, off-schedule buses were heightened when it was learned that the bus operators were asking for a fare raise of from seven to nine cents—after the trolleys had been able to operate on a nickle fare.

The Miami experiment seems to show that St. Petersburg had better try out a modern PCC car before making any decision that will eliminate their car lines for good. With the rails gone, it's too late to make amends. You can throw out the city officials who erred, but that can't bring back your railway lines.

TWO-CAR train on recently abandoned Atlanta Northern interurban route at Carmichael station between Atlanta and Marietta, Ga.

CITIZENS of Atlanta, Georgia, neighboring large city to Birmingham, will not fare so well as those in the Steel City, reports Joseph Broome, 424 Alexander Circle, Marietta, Ga. The plan to eliminate all rail lines at the end of the war, is being quickly accomplished by the Georgia Power Co. Along with the rapidly disappearing Atlanta local lines, the Marietta interurban route, owned by the Atlanta Northern Ry., was sold to bus operators January 31, 1947, and was immediately converted.

Mr. Broome's observations on the changes are interesting: "As usual, the new bus operators promptly raised the fare from the Atlanta Northern's 16 cents to an even quarter. And now (get this, it's really funny), they actually have the nerve to say they reduced the fare because the Southeastern Greyhound Lines which also operated into Atlanta, charged 35 cents a ride; therefore, their fare is a reduction from 35 to 25 cents!

"The ironical part of all this is that they made their argument stick before the Georgia Public Service Commission. But," Mr. Broome adds, "it now costs me 25 cents to get to Atlanta, whereas the interurban fare was 16 cents before the abandonment!"

THANKS to the unnamed correspondent who sent us a clipping from E. V. Durling's "On The Side" column in the *San Francisco Examiner.*

"The trolley car may be a thing of the past in Manhattan but this mode of transportation is not being abandoned everywhere. Some cities are putting new streamlined trolley cars into service. This type of trolley car costs $21,000. It rides very smoothly. To my way of thinking the modern city bus is the most horrible form of transportation ever inflicted on a long-suffering public. Give me a streamlined trolley car with a smoking section in the rear. One that in the good old summer time can be converted into an open car."

* * *

BROOKLYN, will purchase 365 new streamlined trolleys at $22,000 each, reports Donald M. Steffee (author of "Mile-A-Minute-Runs") over the next few years, and in addition, will add buses and trackless trolleys to its service.

"As a native Brooklynite," Mr. Steffee goes on, "one of my greatest satisfactions is to know that our city was the first town to have PCC cars in service. My own home is located almost equidistant from

all four PCC lines here in 'Dodgers' Town.'

"Of course, there will be tearing up of some track, and some lines will be abandoned. But the major portion of the important traffic in Brooklyn will remain on the dependable rails."

Our own observation is that, having seen the merits of PCC cars for twelve years, the operators of the New York City Transit System's Brooklyn streetcar lines, are, naturally enough, sold on the advantage of this type of service. Hence, 365 new streetcars to be ordered for the home of the Dodgers. And incidentally, in case you didn't know it, the Brooklyn Dodger team was originally named as such on account of the trolley lines; the full name used to be the *Trolley Dodgers!*

* * *

INTERURBAN CAR hauled one railfan on a 500-mile trip throughout Eastern U. S. and Canada last year! He was Joe McLaughlin, supervisor of equipment of the Seashore Electric Railway, the railfan organization which, at last count, owned fifteen pieces of electric railway rolling stock.

Late in 1946, when three interurban cars from the abandoned Aroostook Valley (now operating with Diesels) were obtained by the Seashore Electric, Mr. McLaughlin rode them as they travelled on their own wheels via CPR, MEC and M&B, from Maine to North Billerica, Mass., a distance of almost 500 miles.

Incidentally, we learn that the single-trucked mail car, formerly of the Union Street Ry., New Bedford, Mass., which was shipped up to the Edaville Railroad's two-foot gage cranberry and railfan line in Massachusetts, is actually owned by the Seashore group, not by Mr. Carver, as reported earlier by us.

Another piece of rolling stock has been acquired by fans in the East. Number 10 of the Springfield Terminal RR, pictured in *Electric Lines* last July, is now the property of the Connecticut Valley Chapter of N. R. H. S., and is located on their property at Warehouse Pt., Conn. The Connecticut Valley group is also engaged in construction of their railway line, which was temporarily stopped by the war. Along with number 10, they own ex-Connecticut Co. wooden, double-trucked car 65.

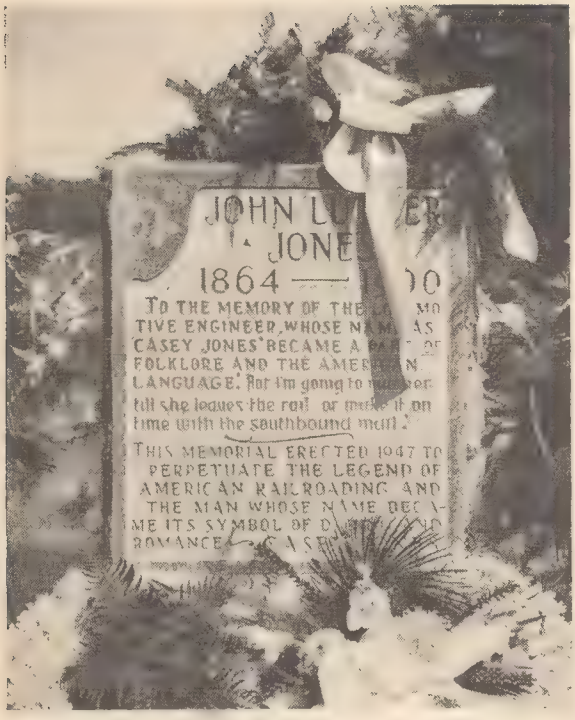
Altogether, they are a very up-and-coming group, and a credit to electric line fans. We wish we had more such ambitious groups.

* * *

SAN FRANCISCO'S Union Street Line which used little center-door, two-man, single-trucked cars, made its final run on June 9th. This line was abandoned to buses gradually, in small portions. During the last few weeks of service, one section of the line was operated with streetcars, another with gas buses and the rest with trolley buses. You had to use all three forms of transportation to ride the line from one end to the other!

ROSTER OF PASSENGER & WORK CARS OF SEASHORE ELECTRIC RAILWAY

No.	Purchased	Type	Builder	Date	Trucks	Motors	Former Owners
31	1939	12 Bench Open	Brill	1900	Br 22-E	2 GE-299	Biddeford & Saco RR.
38	1940	Parlor	Laconia	1907	Laconia	4 GE-80	Manchester-Nashua
615	1940	Birney Safety	Wason	1920			Portland-B. & S. RR.
60	1941	Box	Laconia	1895	Br 21-E		Manchester St. Ry.
82	1946	Birney Safety	American Car	1920	Br 78-E		Denver Tramway-Y. U. C.
71	1946	Coach-Baggage	Wason	1912	27 MCB-2	4 GE-217	Aroostook Valley RR.
70	1946	Coach-Baggage	Wason	1912	27 MCB-2	4 GE-217	Aroostook Valley RR.
4387	1946	Convertible	Laconia	1918	BS 12-C	4-GE-247	E. Mass. St. Ry.
80	1946	Birney Safety	American Car	1920	Br 78-E		Denver-York Utilities
34	1947	Mail					Union St. Ry.
S-71	1945	Line Car	Bay State	1915	Peckham	2 GE-67	Bay State-E. Mass.
038	1946	Motor Flat	Worcester	1919	Bemis	2 WH-25	Worcester St. Ry.
T-116	1946	Trail gondola	Worcester	1910			Worcester St. Ry.
52	1946	Freight Motor	Brill	1909	Br 27EI½	4 GE-205	Aroostook Valley RR.



Memphis and Canton on the night of April 29, 1900, when he met his death. The first and true version of the famous song recording the fatal run, was composed by Wallace Saunders, an illiterate young Negro whom Casey had befriended. The engineer had pushed Illinois Central Number 382 to the incredible speed necessary to make up a 75-minute delay in 174 miles when a dead freight, unable to clear the siding at Vaughn, loomed in his headlights. Casey died at the throttle.

MEMORIAL to "perpetuate the legend of American railroading and the man who became its symbol of daring and romance"

CASEY'S FIREMAN, Simm Webb, at the memorial ceremonies. The seventy-five year old veteran was also present in 1938 at Cayce, Ky., for the dedication of a monument erected at the engineer's birthplace by the local Lion's Club

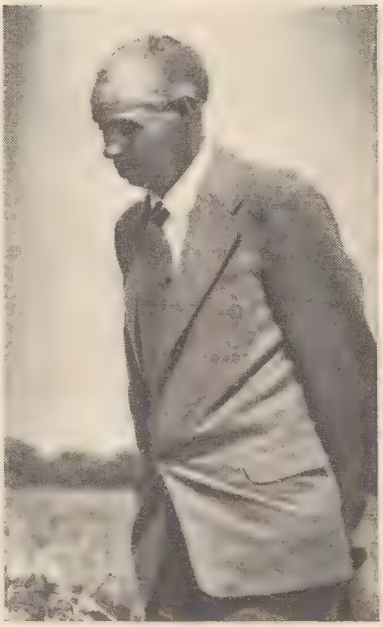
Memorial to Casey Jones

Story in* Railroad Magazine *Prompts Marble Shaft

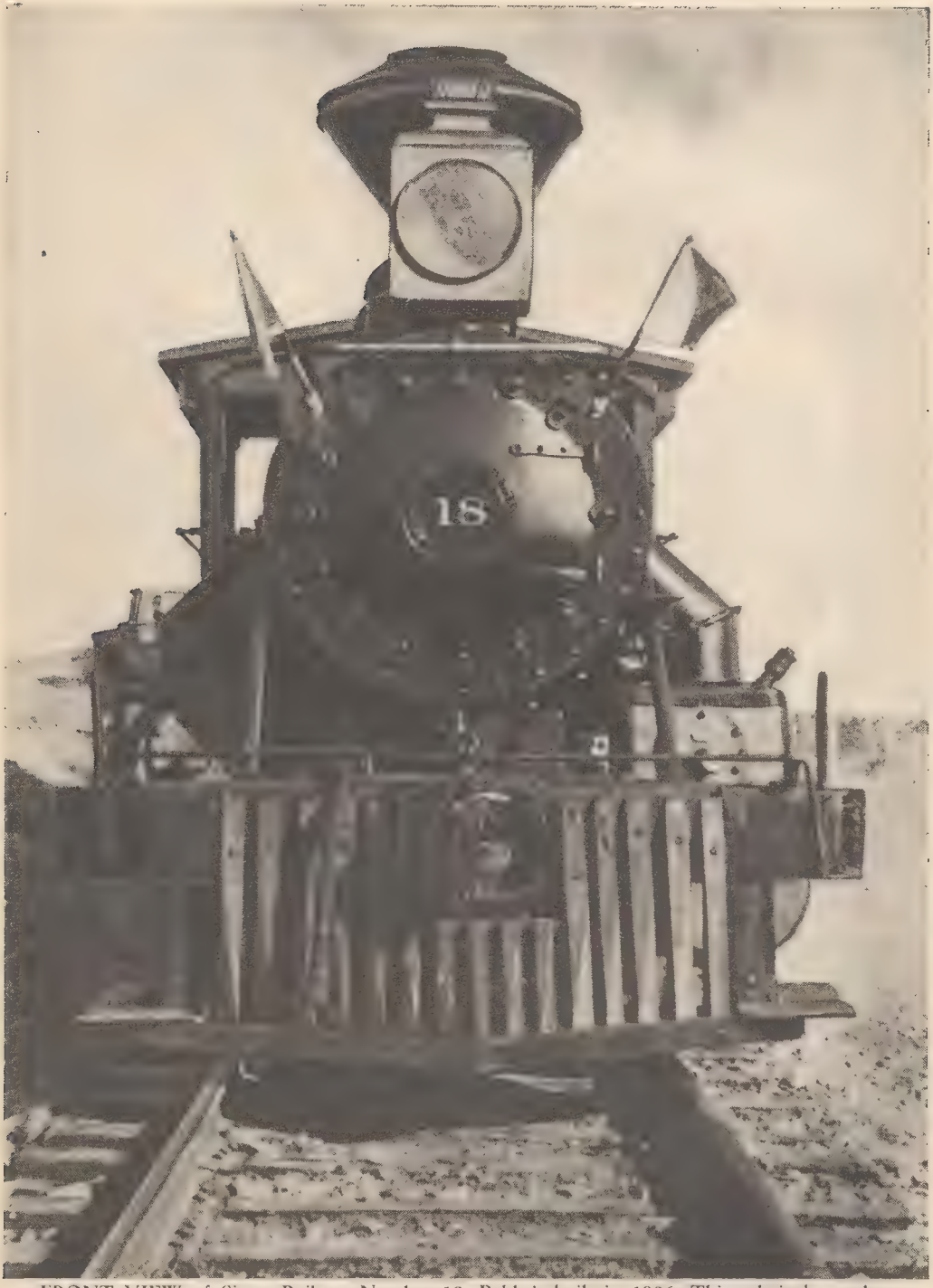
FORTY-SEVEN YEARS after his death at Vaughn, Mississippi, in the most celebrated wreck in the history of American railroading, a bronze and granite memorial was erected over the grave of John Luther ("Casey") Jones. Until this time the spot where the hero lay in Mt. Calvary Cemetery at Jackson, Tennessee, bore no marker but an unpainted wooden cross.

The memorial was the gift of Lucius Beebe and Charles M. Clegg, railroad historians and frequent conrtibutors to *Railroad Magazine* and authors of *Mixed Train Daily, A Book of Short Line Railroads.* Through a recent issue of *Railroad* they learned of the neglect of Jones' grave, and determined upon the rectification of what Beebe, in his dedicatory speech, called "a reproach to the good heart of railroading."

Casey (or Cayce, as he himself spelled it) was doubling on *The Cannonball Express* between



WIDOW of the brave engineer of song and legend poses with Lucius Beebe and Charles M. Clegg, donors of the monument, in Mt. Calvary Cemetery. Present also for the memorial exercises were Charles Jones, Casey's son, who is employed in the Illinois Central's shops, and his granddaughter, Barbara



FRONT VIEW of Sierra Railway Number 18, Baldwin-built in 1906. This relatively modern oilburner has been hauling freight on the road ever since, except for brief period in Warner Bros. ***Santa Fe Trail***. They costumed her in false wooden sides, out-of-proportion diamond stack; forgot to remove air pump, MCB coupler and other modern attachments

Talented Train

By HAL N. COLTON

HOLLYWOOD has what is probably the most talented train in the world. It has chugged its way around the globe without going more than a quarter of a mile. It has smashed speed records without registering more than fifteen miles an hour, and this not even under its own power. Surviving bombings, holdups, crackups and bridge washouts, its passenger lists have included royalty, criminals, animals, and just plain folks. And it has appeared as everything from an extra-fare silver streamer to a shabby second-class freight.

This train does all these things without ever moving off Lot Number 2 at the Metro-Goldwyn-Mayer Studios in Culver City, California. Lined up there are three standing sets of stations. The first is MGM's version of a big city railroad station: most train trips begin and end right on the track at this station. But no matter in what direction it's supposedly heading, Hollywood's train always takes the same route. It stays right on the same short section of track, while the signs on the adjoining station are changed.

Naturally, political and geographic boundaries put no limitations on its trackage. It has carried Robert Walker to New York's Penn Station in *The Clock,* Greer Garson to Victoria Station in London for *Mrs. Miniver,* Irene Dunne to Southampton in *The White Cliffs of Dover,* and Robert Taylor to Moscow in

Only Seven Locomotives Are Owned by Motion Picture Studios. They Range in Date from 1872 to 1905—and Don't Let Anyone Tell You Different!

HOLLYWOOD lettering and numbering for ***Duel in the Sun.*** This is Virginia & Truckee 22, pulling a V&T Kimball coach

RANCHER turned engineer was played by Joseph Cotton in a drama of longhorns versus locomotives — ***Duel in the Sun.*** Again V&T's 22, wearing the additional gingerbread Paramount added in 1938 for ***Union Pacific***

HARVEY GIRLS had pretensions to being a real railroad picture. ***Below and at right,*** views of old coaches, dressed up to resemble AT&SF cars. Paramount has corner on V&T coaches. V&T number 11, not shown, was sold to MGM in 1945 and first used in this picture

Song of Russia, without budging an inch.

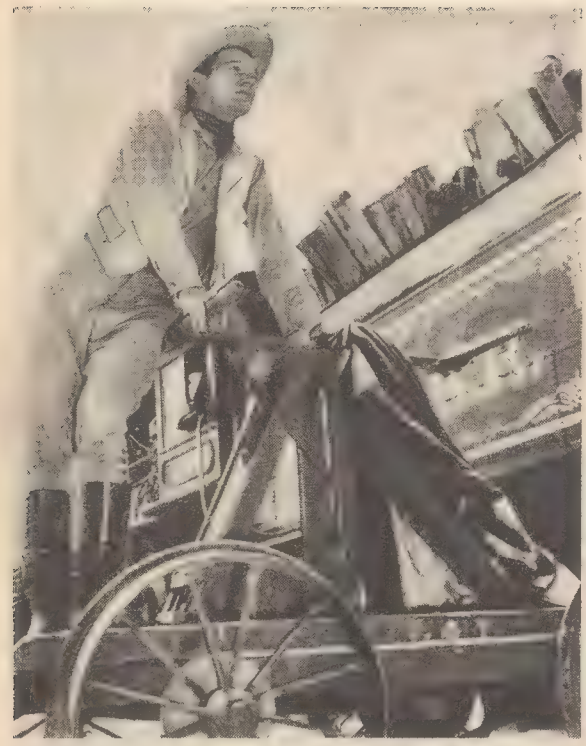
Once in a while, though, the train actually gets to travel—to MGM's second station set. It wheels a few hundred feet down the track to arrive at Carvel, home of Andy Hardy and his family. *Traveling* to this train, however, means being pulled by a ten-ton truck loaded with concrete blocks to give it traction. The truck is out of camera range, of course.

As the train pulls into Carvel Depot, it puffs as joyously and realistically as if it had escaped from Lot 2 and were making a real trip to a real middle western city. Sometimes the train goes to Toledo, Ohio. Toledo is the first stop after Chicago on the New York Central's *Twentieth Century Limited,* and anyone who forgets to mail a letter in

Chicago usually jumps off at Toledo to do so—in the movies, that is. Well, with a change of sign and the addition of a U.S. mailbox, Carvel Depot becomes part of the Toledo station—MGM version. Metro's train pounds the rails getting the hero there on time.

From Carvel to Port Huron, Michigan, is just another couple of hundred feet down the track. Port Huron is MGM's third standing set, an exact duplicate of the station where Mickey Rooney as *Young Tom Edison* earned his early living as a candy butcher, and once rescued a little girl from being crushed beneath a train when she fell on the tracks. Young Robert

ON LOCATION. V&T's 22, Baldwin-built and outshopped in 1875, played her first movie role in ***Wells Fargo;*** is now Paramount-owned. Smoke will obscure fake qualities of wooden dummy stack on truck at left ***below***



SECTION CAR is publicized as old and oaken. Rancher hero of *Duel in the Sun* leans against the lever arm. In rear, wood-piled tender attempts to create period atmosphere of 1880s. Engine is stored at U.P. shops in East Los Angeles when not in use

Shannon of *The Green Years* got off at a renovated Port Huron to find himself in Winton, Scotland.

Travel in the movies is not only broadening, it's downright confusing. The people who set up time schedules for operating railways would give up if compelled to conform with Hollywood timecards. A timetable reads something like this:

Depart New York City,
arrive Newark, N. J.
Approximately 2 days....10 miles
Depart Los Angeles, arrive Chicago. Approximately 2 days.....2207 miles

It takes a picture crew and cast the same amount of time to film the departure and arrival of a 10-mile trip as it does to record a 2207-mile trip.

All cars in this talented train are veterans of service on existing carriers. They were brought by the studio's purchasing department and hauled over the tracks to Metro's location, which has its own railroad siding. Like glamour girls, the cars undergo frequent changes of body contours. They get new chassis and new fittings, mostly of plaster, wood and paint, as they change from Pullmans to coaches, dining cars, club cars and so forth. The only Hollywood cars that never change much are the Kimball coaches owned by Paramount and the two fine Brill cars with stained-glass windows in the clerastories. Fox's coaches seem to belong to the era of 1890. They were acquired along with the Cooke 4-4-0, built as Ft. Worth-Denver City Number 9.

The studio keeps a supply of extra coaches on hand. These include two cars bought from the New York Subway Company and two British-style coaches. The most recent and prized purchase is a little black locomotive still bearing the seal of the Baldwin Locomotive Works in Philadelphia.

MGM has a lot to say about its train. As a player she shows no prima donna temperament, no desire for stealing scenes. And she's not troubled by her audience discovering her age; she carries every role with equal grace.

Of course the best thing about this talented train is that passengers need never run like sixty for it, only to arrive just as it's pulling out.

AUTHENTIC Wells-Fargo boxcar on the set with Spencer Tracy for MGM's *Sea of Grass*. Publicity is to the effect that this car, now posing as a baggage or mail car, is only old buggy with its body unchanged. But V&T's Kimball coaches, Paramount-owned, and a couple of Brill cars, are intact

NOPE; that's not the V&T Number 22 *below;* but a miniature prop especially built for the wreck scene in *Duel in the Sun*. The 22 operated continuously until September, 1937; has since been leased for numerous pictures. She's identical with V&T number 11, Baldwin-built in 1872, and now owned by MGM

Locomotives of the Canadian National

Steam Locomotives

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effect	Builder and Date
0-6-0 (Switcher) Type—276 Engines							
O-7-a	7014	19 x 26	51	180	120,000	28,000	Montreal, 1910
O-7-b	7021, 7025	19 x 26	51	180	121,200	28,000	Montreal, 1911
O-10-a, b	7035, 7038–7040, 7043, 7044, 7053, 7055, 7060–7062	19 x 26	51	180	123,000	28,000	Can. Loco., 1912–14
	Formerly Canadian Northern 341, 344–346, 349, 350, 359, 366–368						
O-14-c	7075	18 x 26	51	200	123,000	28,000	Can. Loco., 1906
	Formerly Canadian Government 809						
O-9-a	7125, 7127–7135, 7138, 7141, 7142, 7146, 7147, 7149–7152, 7157, 7169–7171, 7173–7175, 7177, 7183	22 x 26	56	165	153,400	30,000	G.T., 1903, 07; Bald., 1908; Can. Loco., 1913
	7144, 7202, 7215, 7216	20 x 26	56	190	148,100	30,000	G.T., 1903, 07; Bald., 1908; Lima, 1912; Can. Loco., 1913
	Formerly Grand Trunk 1651–1717						
O-5-a	7300	20 x 26	51	200	148,800	35,000	Alco., 1907
	Formerly Canadian Northern 308						
O-13-a	7302–7304	21 x 28	51	180	165,000	35,000	Can. Loco., 1918
	Formerly Canadian Northern 500–502						
O-15-a	7305, 7306	20 x 26	51	200	137,700	35,000	Can. Loco., 1904
O-15-b, c	7307, 7308, 7311–7314	20 x 26	51	200	144,000	35,000	Can. Loco., 1911, 12
	Formerly Canadian Government 818, 819, 822–825						
O-15-d	7315, 7318	20 x 26	51	190	149,000	35,000	Can. Loco., 1913
	Formerly Canadian Government 826, 829						
O-12-a, b, c, d, f	7319–7423	21 x 26	51	180	154,400	35,000	Can. Loco., 1914, 18–20; Can. Fdry., 1915; Montreal, 1919
O-16-a	7339–7358	21 x 26	51	180	163,000	35,000	Can. Loco., 1914, 18–20; Can. Fdry., 1915; Montreal, 1919
	Formerly Canadian Government 830–881; Canadian Northern 400–434						
O-18-a, b	7424–7498	22 x 26	51	175	174,000	37,000	GT., 1919–21; Lima, 1920
	Formerly Grand Trunk 1749–1823						
O-18-c	7499–7511	22 x 26	56	190	177,000	36,000	GT., 1922; Can. Loco., 1923
	Nos. 7499–7508 formerly Grand Trunk 1829–1838						
O-18-d	7519–7521	22 x 26	56	190	180,000	36,000	Lima, 1923
O-19-a	7522–7526	22 x 28	51	190	165,000	39,000	Alco., 1914
	Formerly Grand Trunk 1744–1748, 1824–1828						
	7527–7531	21 x 28	51	190	163,500	39,000	Alco., 1914
O-20-2	7532–7541	20 x 26	51	200	160,400	35,000	Montreal, 1911
	Formerly Grand Trunk Pacific 400–409						
0-8-0 (Switcher) Type—148 Engines							
P-4-a	8200–8209	26 x 30	56	180	242,750	55,000	Can. Loco., 1920
	Formerly Grand Trunk 1890–1899						
P-4-b	8210–8214	26 x 30	56	180 –	246,900	55,000	GT., 1923
	Formerly Grand Trunk 1885–1889						
P-4-c	8215–8221	26 x 30	56	180	242,750	55,000	Can. Loco., 1923
P-4-d	8222–8226	26 x 30	56	180	249,000	55,000	Lima, 1923
P-5-a	8296–8299, 8300–8304	22 x 28	51	200	208,000	45,000	Alco., 1923
	Nos. 8296–8299 formerly Central Vermont 502, 503, 505, 506						
P-5-b	8305–8319	22 x 28	51	220	211,000	45,000	Alco., 1924
P-5 c, d	8320–8339	22 x 28	51	220	214,000	50,000	Lima, 1927; CNR, 1927, 28
P-5-e	8340–8349	22 x 28	51	220	211,000	50,000	Bald., 1927
P-5 f	8350–8369	22 x 28	51	220	220,000	50,000	Can. Loco., 1929; Montreal 1929
	Nos. 8360–8369 weigh 217,700 lbs.						
P-5-g	8370–8381	22 x 28	51	220	215,150	50,000	Bald., 1929
P-5-h	8382–8416	22 x 28	51	220	221,800	50,000	CNR, 1930–31
0-8-2 (Switcher—Converted Mikado) Type—7 Engines							
S-1-g, h	3515–3517, 3520–3523	27 x 30	63	175	279,400	52,000	Alco., 1918
2-6-0 (Mogul)							
C-3-b, c	407	19 x 26	51	180	129,500	28,000	Montreal, 1911
	Formerly Canadian Government 4537						
C-5-b	409, 411, 412, 414	19 x 26	51	180	130,000	28,000	Montreal, 1908, 13
	Formerly McArthur Co.'s 8, 12, 15, 19						
C-7-a	423, 424, 426, 428	19 x 26	51	180	129,600	28,000	Montreal, 1911
	Formerly Grand Trunk Pacific 394, 395, 397, 399						
E-7-a	674, 713, 734, 741, 742, 745, 746, 755–757, 772, 788, 793, 800–802, 808, 816, 818, 822, 825, 829, 830, 833, 836, 837, 844, 845, 849, 850, 858, 859	21 x 26	63	180	177,700	25,000	Dickson, 1900; GT, 1899–04; Montreal, 1905; Can. Loco., 1905, '06

Formerly numbered between 1203 and 1434 in old Grand Trunk roster

Photo by R. W. Biermann, 4238 20th St., San Francisco, Calif.

TWO HUNDRED and seventy-six 6-wheeled switchers classify freight in CNR's far-flung terminals. Here's a typical example of the O-12 Class

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effect	Builder and Date
E-10-a	902–911, 914, 915 919, 923–926	21 x 26	63	170	141,800	26,000	Can. Loco., 1910
	Formerly Grand Trunk 1000–1009, 1012, 1013, 1017, 1021–1024						

2-8-0 (Consolidation) Type—595 Engines

M-4-h	1878	20 x 28	56	180	173,650	30,000	Can. Loco., 1905
	Formerly Canadian Government 78						
M-4-i	1887, 1890, 1891, 1893, 1894, 1901, 1903, 1904	20 x 28	56	180	174,600	30,000	Can. Loco., 1907
	Formerly Canadian Government 87, 90, 91, 93, 94, 101, 103, 104 No. 1903 has 21 x 28 in. cylinders						
M-4-j	1906, 1911, 1914	22 x 28	56	180	174,600	30,000	Can. Loco., 1908
	Formerly Canadian Government 106, 111, 119 No. 1914 has 20 x 28 in. cylinders						
M-4-k	1918, 1920, 1927, 1931, 1932	22 x 28	56	180	174,600	30,000	Can. Loco., 1908
	Formerly Canadian Government 118–132 Nos. 1920 and 1927 have 20 x 28 in. cylinders. No. 1932 has 20½ x 28 in. cylinders						
M-4-l	1945, 1946	22 x 28	56	180	178,800	30,000	Can. Loco., 1910
	Formerly Canadian Government 145, 146						
M-4-m	1948	20 x 28	56	180	170,000	30,000	Can. Loco., 1910
	Formerly Canadian Government 148						
M-4-n	1950	20 x 28	56	180	173,800	30,000	Alco., 1901
	Formerly Canadian Government 151						
M-8-a	1981–1984	22½ x 32	57	180	195,360	44,000	Alco., 1905
	Formerly Central Vermont 405–408						

Photo by Harold McMichael, Waterford, Ont., Canada

MOGUL for the St. Thomas Local. She's the 904, pictured at Simcoe, Ont.

Class	Numbers	Cylinders	Drivers	Pressure	Engine Weight	Tractive Effect	Builder and Date
M-1-a	2013, 2015, 2016, 2021–2024	23 x 26	57	180	172,900	35,000	Can. Loco., 1907
		Formerly same numbers, Canadian Northern					
		Nos. 2016, 2021 have 21 x 26 cylinders, 200 lbs. boiler pressure					
M-1-b	2025–2064	21 x 26	57	200	169,000	35,000	Can. Loco., 1908, '09
		Formerly same numbers, Canadian Northern					
M-3-a	2090–2122, 2124	21 x 26	57	200	181,400	35,000	Montreal, 1907–'09
		Formerly same numbers, Canadian Northern					
M-3-c, d	2125–2154	23 x 26	57	180	188,000	35,000	Alco., 1911; Can. Loco., 1912
		Formerly same numbers, Canadian Northern and DW & P (2125–2129)					
M-3-e	2155–2179	23 x 26	57	180	185,800	35,000	Can. Loco., 1913
		Formerly same numbers, Canadian Northern					
M-5-a	2180–2184	22 x 28	57	200	197,300	40,000	Can. Loco., 1912
		Formerly Canadian Government 201–205					
M-5-b	2185–2189	22 x 28	57	200	200,900	40,000	Can. Loco., 1913
		Formerly Canadian Government 206–210					
M-5-c	2190–2194	23 x 28	57	180	202,300	40,000	Montreal, 1913
		Formerly Canadian Government 211–215					
M-5-d	2195–2200	22 x 28	57	200	200,900	40,000	Can. Fdry., 1915, '16
		Formerly Canadian Government 216–221					
N-3-a	2334–2338	24 x 32	63	180	227,000	45,000	Montreal, 1913
N-3-b, c, d	2339–2384	24 x 32	63	180	231,800	45,000	Can. Loco., 1913–'16
N-1-a, b, c	2385, 2391, 2393, 2454	24 x 32	63	200	236,000	45,000	Can. Fdry., 1912–'14, 1917, '18
		Nos. 2385–2399 formerly Canadian Government 251–265; others formerly Canadian Northern, same numbers					
N-2-a	2455–2464	24 x 32	63	200	240,000	50,000	Alco., 1917
N-2-b	2465–2514	24 x 32	63	200	241,000	50,000	Montreal, 1918
		Formerly Canadian Northern, same numbers					
N-4-a, b, c, d, f	2515–2686	23 x 32	63	180	211,200	40,000	Montreal, 1906, '10; Alco., 1906, '10, '11
		Formerly Grand Trunk engines					
N-5-a, b	2687-2726, 2728–2746	21½ x 30	63	215	214,300	40,000	Montreal, 1911, '12
		Formerly Grand Trunk Pacific engines					
N-5-c	2747, 2748	21½ x 30	63	215	223,960	40,000	CNR, 1926
N-5-d	2749–2768	20 x 30	63	250	233,870	40,000	CNR, 1931
N-4-g	2800–2801	21½ x 32	63	200	230,188	40,000	CNR, 1926
N-4-b	2810–2819	22 x 32	63	190	204,280	40,000	Alco., 1906
		Formerly Central Vermont 409–418					

2-8-2 (Mikado) Type—458 Engines

S-1-j	3189, 3199	27 x 30	63	180	311,740	53,000	CNR, 1926
		These engines have boosters					
S-1-a, b	3200–3299	27 x 30	63	180	277,550	53,000	Can. Loco., 1916, '17, '18
		Formerly Canadian Government 2800–2899. Nos. 3241, 3242 weigh 302,290 lbs., have boosters; No. 3247 weighs 297,720 lbs., has booster					
S-1-c	3300–3329	27 x 30	63	180	281,500	53,000	Montreal, 1917
		Formerly Canadian Government 2900–2929					
S-1-d	3330–3364, 3366–3389	27 x 30	63	180	277,550	53,000	Can. Loco., 1918, '19
		Formerly Canadian Government 2930–2989					
S-1-e	3390–3404	27 x 30	63	180	288,600	53,000	Can. Loco., 1920, '21
S-1-f	3405–3429	27 x 30	63	175	283,000	52,000	Alco., 1913
		Formerly Grand Trunk 500–524					
	3430–3454	27 x 30	63	175	272,100	52,000	Bald., 1913
		Formerly Grand Trunk 525–549					
	3455–3504	27 x 30	63	175	283,000	52,000	Montreal, 1913
		Formerly Grand Trunk 550–599; No. 3455 has booster					
S-1-g, h	3505–3514, 3518, 3519, 3524	27 x 30	63	175	284,800	52,000	Can. Loco., 1917; Alco., 1918
		Formerly Grand Trunk Nos. 485–494, 483, 484, 499					
		Nos. 3518, 3519 have 180 lbs. boiler pressure					
S-2-a	3525–3559	27 x 30	63	185	314,800	55,000	Montreal, 1923
S-2-b	3560–3569	27 x 30	63	185	322,450	55,000	Can. Loco., 1923
		These engines have boosters					
S-2-c	3570–3589	27 x 30	63	185	326,200	55,000	Montreal, 1929
	3590–3599	27 x 30	63	185	325,100	55,000	Montreal, 1924
		These engines have boosters					
S-3-a	3700–3739	26 x 30	63	200	290,000	55,000	Alco., 1918
		Formerly Grand Trunk 440–479					
S-3-b, c	3740–3757	26 x 30	63	200	306,500	55,000	Alco., 1923, '24
S-4-a	3800	24 x 30	63	265	337,200	60,000	CNR, 1930
S-4-b	3801–3805	24 x 30	63	265	339,400	60,000	Can. Loco., 1936
		No. 3805 has 56,000 lbs. tractive effort					

2-10-2 (Santa Fe) Type—93 Engines

T-1-a	4000–4009	26 x 32	57	200	320,000	65,000	Alco., 1916
		Formerly Canadian Government 2000–2009					
T-1-b	4010–4019	26 x 32	57	200	320,000	65,000	Montreal, 1918
		Formerly Canadian Government 2010–2019					
T-1-c	4020–4044	26 x 32	57	200	319,300	65,000	Montreal, 1920
T-2-a	4100–4104	29 x 32	57	200	409,240	80,000	Can. Loco., 1924
		91,735 lbs. tractive effort with booster					
T-3-a	4200–4209	27 x 32	57	200	352,000	70,000	Alco., 1919
		Formerly Boston & Albany 1100–1109					
T-4-a	4300–4314	24 x 28	57	250	347,600	60,000	Can. Loco., 1929
		70,500 lbs. tractive effort with booster					
T-4-b	4315–4332	24 x 28	57	275	344,170	62,000	Can. Loco., 1930

To be concluded next month.

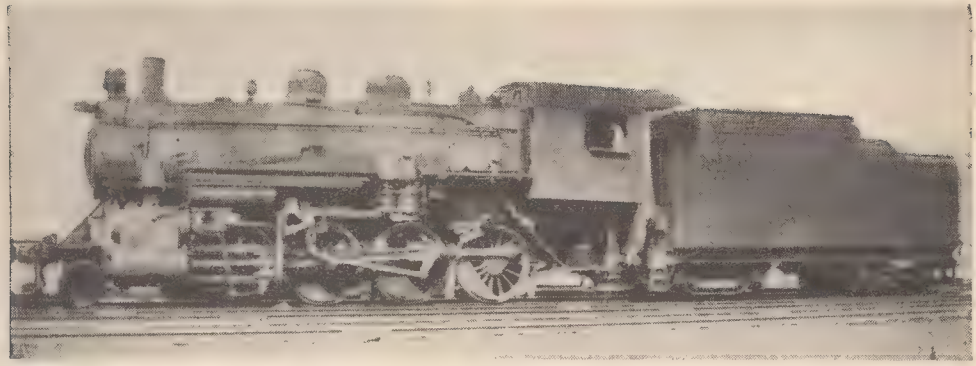


Photo by H. E. Strothard, Springfield, N.S., Canada

CONSOLIDATION 2358, of the N-3-c Class, works out of St. John, N. B. She was built by the Canadian Locomotive Co. in 1915

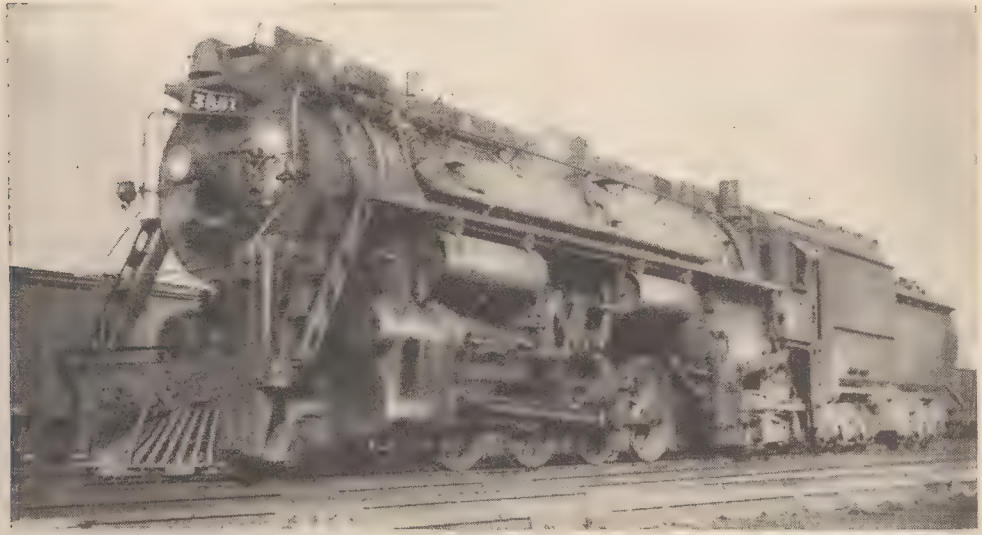


Photo by Harold Trenholm, Box 504, Watrous, Sask., Canada

NEWEST Mikado Class is S-4-b, engines 3801 through 3805. She has roller bearings on leading and trailing trucks

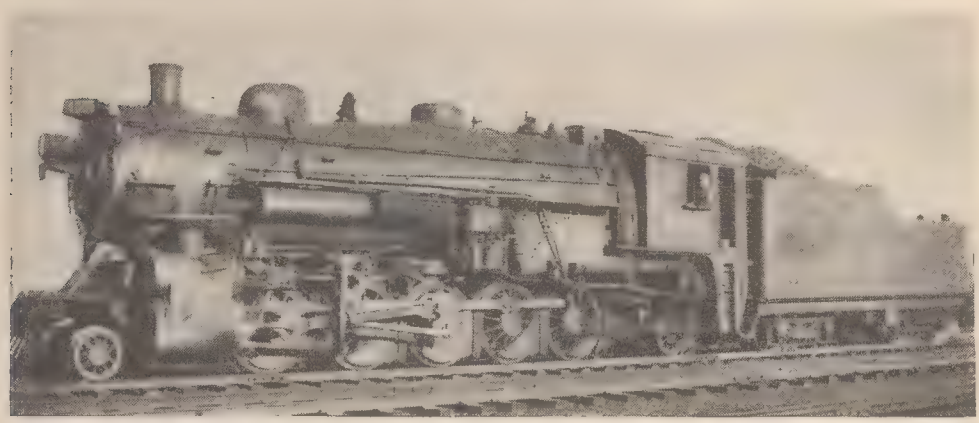


Photo by H. E. Strothard

ALCO built the 4005 for the Canadian Government Railway in 1916. She was originally numbered 2005

Photo by Lucius Beebe

SECOND ENCOUNTER: Number 5 ran on the Nevada Copper Belt's line between Hudson and Wabuska when Lucius Beebe first photographed her for ***Mixed Train Daily, A Book of Short Line Railroads***; but last month, relettered and with her cylinder heads silvered, he saw her again, rolling through the Nevada sage brush in place of Virginia & Truckee's Number 25, now the property of Paramount Pictures

On the Spot

Railfaring Men Sit With the Editorial Crew to Swap Experiences, Offer Suggestions and Settle Arguments

RUSTY RAILS of the New Haven's Shepaug branch are dear to the hearts of the Yankees who live at Litchfield, Conn., and elsewhere along this 32-mile line; and angry retorts greet the suggestion that the trackage should be abandoned, reports George J. Flynn in *The Sunbury Republican,* Waterbury, Conn.

The Shepaug, although one of the prettiest rural roads in the country, doesn't pay. But how many other roads dropped 95 percent in value and managed to keep running? And with a depleted treasury and bleak prospects, how many other railroads could buy a parlor car and schedule a luxury run?

These things were accomplished by a line whose trains travel almost twice the distance of their route by air-line and whose cars move so slowly that crew men have walked along the right-of-way, picked flowers, and hopped aboard again.

The Shepaug, running between Litchfield and Hawleyville, was planned shortly after the Civil War by Maj. Edwin McNeill, a Union veteran. The road was incorporated in 1869 as the Shepaug Valley RR. Co. Many supporters donated land for the right-of-way, some with foolish restrictions that annoyed the railroad builders. Most of the donors demanded the erection of a board fence beside the track, and $75,000 was spent for this purpose. However, the fence vanished quickly, partly destroyed by locomotive sparks and partly stolen by farmers who needed the wood for repairs or fuel on their own farms. Today not a trace of the old fence remains.

Construction of the railroad, begun in 1870, cost over a million dollars. McNeill was the first superintendent. The valley's population, then 6,386, has increased to only about 7,000 in over 75 years. Regular service began in 1872. Trains took 2½ hours to make the 32-mile run, with ten stops. Today, with stops only at Roxbury and Washington, freights cover the 32 miles in 3 hours and 10 minutes. Hit by the panic of 1873, the road went into bankruptcy and emerged as the Shepaug RR. Co. In 1887 it failed again, resuming business as the Shepaug, Litchfield & Northern. The "& Northern" was a bit of whimsy, for the northern terminus remained the same, at the foot of Litchfield's steep West Hill.

Buying a parlor car, the SL&N began daily through-service to New York, with occasional excursions to Coney Island. In 1898 the New Haven absorbed the small road. They dropped passenger service in 1930 after futile experiments with a gas-powered coach. Even so, the route is so pleasant that it attracts one of the most experienced crews on the entire New Haven Road. Ralph Spalding, flagman, and Henry R. Johnson, brakemen, are both No. 1 men on the division seniority list, which means they could have their pick of any run on the division, yet they choose the Shepaug. Condr. Frank J. Herbst is No. 2 man, while Eng. Robt. Baird is close to the top. Fireman Joe Wood is young.

George F. Brennan, Box 17, Seymour, Conn., who sent us this item, wants to hear from readers interested in forming a model railroad club in his vicinity.

* * *

GUATEMALA HEARD FROM. A copy of our March issue fell into the hands of D. E. Sheeran, Supt., Atlantic District, International Rys. of Central America, down in Guatemala. Mr. Sheeran was road foreman of engines in the 728th U. S. Railway Operating Battalion

during the late war. Joe Easley's picture of a runaway Central Vermont motorcar (March issue) reminds him of a similar, though more serious, incident that happened in France early in 1945. In telling us about it, Mr. Sheeran uses a typewriter that he bought from a German station-master for a pack of cigarettes. Here is the incident:

"The French National Railways (SNCF) were being operated by the U. S. Military Railway Service. The section between Cherbourg and Lison was under the 728th. A corporal named John Allis was the engineer of a double-header eastbound train one winter day. He had a French fireman in his cab and a French crew rode the second engine. Allis had a clearance from Chef-du-Pont to Carentan which gave him a clear block. At about 8 a.m. a dense Channel fog covered the country, reducing visibility to around his smokebox, but Allis knew the road well and was making about 35 miles per hour.

"Unknown to him, a large motorcar operated by Pvt. Otto Pennell of Co. A, 728th, and occupied by 14 French trackmen was running ahead of him in the same direction but at about 10 mph. All 15 men were warmly dressed. Their ears were covered. The fog, besides its chilling qualities, blanketed sound. The first warning they had of the following train was when its engine hit their car. Allis's first hint of anything wrong was when he saw the men rolling and tumbling beside the track, and he quickly 'big-holed' the train.

"The impact knocked several men from the motor. The others jumped in panic. Three were killed; all the others were injured, some seriously. Pennell, the motorman, was possibly the least injured. The collision knocked the motor's throttle into full speed. Away it went, about 65 mph., riderless, toward Carentan!

"Awaiting the eastbound passenger train at Carentan were several hundred people.

"Suddenly the runaway motor roared through. The sight and sound of its approach were muffled by fog until it almost reached the station. Nobody was hit, but several had narrow escapes. The motor flashed by. About 1000 feet east of the station, another eastbound train was picking up. The extra had just called in his flag when the motor passed the station.

"About 100 feet behind the eastbound's caboose stood another motorcar, occupied

Photo from Clifford A. Falkenau, General Electric Co., Schenectady, 5, N. Y.

MULTIPLE-UNIT Diesel-electrics shipped in May from G.E.'s plant at Erie, Pa., to CNR's Prince Edward Island line, where the Canadian road is inaugerating complete Dieselization. The 7751 and 7752 weigh in at forty-four tons each, rate 380 h.p.

Photograph from W. R. Hicks, 25 Hawthorne Ave., Glen Ridge, N. J.

THREE-UNIT Diesel 5900 on PRR's main line at Baltimore, Md. This 6000 horsepower GM newcomer is radio equipped for operation over the Middle and Pittsburgh divisions

by Lt. John Moore, signal officer, 728th, and three linemen. Luckily, they heard the noise and had just stepped off their car when the runaway hit it. The force drove both cars under the side door of the eastbound's caboose just as the slack ran out and the train started. Both motors were totally wrecked.

"The anglecock on the caboose's rear was knocked off, automatically applying the brakes. The American conductor and the French flagman joined the birds, diving out the same door. Rolls of wire, tools, clothing, canned food, etc., that had been on the signal motor were scattered over an area 200 feet in diameter, but fortunately neither the signal gang nor the train crew were hurt."

When the runaway went through Carentan, our correspondent was in the cab of a Diesel switcher on the ready track alongside the westbound platform, and quickly surmised what had happened.

"Gathering up several men," he continues, "we picked up a medic's caboose-dispensary with the Diesel, put out a flag against the passenger train on the westbound, and got going as fast as the flagman could run. Due to the heavy fog, we had four flags out at intervals of about 200 yards, each with lighted fusees.

"Operator Dennis Lucey, a former BMT towerman from New York City, phoned a nearby Army hospital, telling them there had been an accident somewhere west of town and asking them to send ambulances and doctors to the station to meet the Diesel and medic's car when we returned. He also notified the Chef-du-Pont operator to hold the passenger train if it hadn't already left. The passenger conductor, Sgt. Henry Roman, was in the operator's office and held his train until we returned to Carentan.

"Meanwhile, not waiting for us to get back, the ambulances drew near the scene of the fatal accident and its crew waded through swampy water and mud waist-deep with stretchers to pick up the wounded victims. We took the bodies of the dead to a nearby section house."

* * *

A BOTTLE buried 47 years ago holds memories for Orie C. Ramsay, 214 7th Ave. W., Hutchinson, Kan. The bottle had nothing to do with a "Lost Week-

Press Association, Inc.
MEMORIAL to Casey Jones unveiled by the engineer's granddaughter, Barbara, in the presence of Lucius Beebe, New York columnist and rail historian who, with Photographer Charles M. Clegg, donated the bronze and granite headstone for Casey's grave

End." It never contained a beverage, not even medicine. Here is the story as Mr. Ramsay told it to us:

"In the spring of 1900 I was a lubberly kid of 17 working for the Missouri Pacific at Hutchinson, rustling freight, writing expense bills, carrying the mail from the post office to the depot and, between times, learning the Morse code with the idea of becoming an operator.

"Dad was baggageman and janitor at the passenger depot. One April morning he routed me out of bed about 5:30 a.m., saying: 'Son, my rheumatics are bothering me. Come along and help to sweep out the waiting room and carry out the ashes from the furnace room.' Arriving at the station, Dad unlocked the door and flipped on the wall switch, but there was no light. He said: 'Son, I reckon a fuse has blown. I'll go across to the office and try to get some light there." Halfway across the waiting room, he found a man stretched out on the floor. He held his lantern over the stranger. 'What in hell are you doing here?' he demanded. 'This is no hotel.'

"At that moment came the sound of wagon wheels. Fred Kingsbury, the Pacific Express driver, was backing up to the loading dock at the rear of the building. Dad asked me to call him in. Fred came in, looked at the figure, and asked: 'What happened? Is he dead?'

" 'Yes,' Father said. 'Dead as a mackerel. You'd better hightail it over to the county jail and notify the sheriff.'

"The office safe had been blown. The room was a wreck—all electric lights out, window panes broken, and plaster fallen from the walls. Dad said: 'Son, I reckon it's time to call John.' John, the operator and ticket agent, had a room on the floor above. Dad had to call several times to arouse him. How that op had slept through such a mess was a mystery to me.

"The deceased was a yegg who had used an overdose of nitro-glycerine in blowing open the safe, thereby meeting an untimely end. All the money was accounted for except three cents, one of which I found later while helping Dad to clean up the litter. This penny I have kept as a memento. Among the rubbish we found a half-pint whisky bottle, one-third full of a yellowish fluid. Foolishly I shook the bottle while holding it to the light. Dad asked me to set it down 'very easy' on the telegraph desk. Surprised, I did so.

" 'Son,' he said kindly, 'in that bottle is enough high explosive to blow up half this town and you along with it.' Gingerly he took the bottle, got a spade, dug a hole two feet deep, pulled the cork, laid the bottle on its side and covered it up.

Even today, 47 years later, when I pass that spot it brings up memories of the past. The dead man was identified as a citizen of Larned, Kan., who posed as a real estate dealer. Fred Kingsbury eventually became a MoP conductor, was retired, and died years ago."

* * *

DELAWARE & HUDSON article by William L. Rohde (April issue) contained two or three slight errors, according to Alfred W. Gale, Troy, N. Y., vice president and director of the Albany & Vermont and the Saratoga & Schenectady roads. Before the merger he was vice president and director also of the Rensselaer & Saratoga. Mr. Gale writes:

"On page 24 in the list of leased lines a note indicates that the R&S was acquired through control of Cooperstown & Charlotte Valley RR. This is wrong. The R&S actually became part of the D&H by merger after having been leased to it for years. We have no information indicating that the S&S controlled the R&S by stock ownership. The S&S is a small company as compared to the R&S, to which it is leased along with the A&V. The A&V is the main route out of Albany for the R&S. At the time of the merger of the D&H, the A&V, and the S&S were not included but were leased directly to the D&H which has assumed the old leases.

"The statement on page 26 that the D&H provides shuttle service for the Boston & Maine is an error. At one time locals used to run every half-hour, operated by the D&H and the New York Central as a joint venture. This service has been dead for years. The NYC brings the sleeping cars for *The Minute Man* back and forth between Troy and Albany."

Regarding *The Laurentian,* pictured in April issue, page 116, Mr. Gale comments: "This train operates between New York and Montreal. At no point, except through accident of curves or short stretches of track, is it an eastbound train. It operates south through Troy and north through Albany."

* * *

TRAIN-ORDER problem is not answered correctly in June '47 issue, page 137, if the trains in question are operated under standard rules, according to Roy Cluck, train dispatcher, 608 Central Ave., Hannibal, Mo.

He writes, "Had the dispatcher not desired Relief Extra 101 to remain at D for Extra 210 east, he should have set up the orders giving Extra 101 right over Extra 210 east, A to D. Then, on arrival of Extra 101 at D, there would be no further obligation except for Extra 210 east to know that Extra 101 had arrived at D before proceeding further.

"Since, however, a meeting point is incorporated in the orders, it is the obligation of each train to fulfill all provisions of the order. Standard rules provide that train orders, once properly issued, remain

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in effect until fulfilled, superseded or annulled. Certainly all provisions of the order in question would not have been fulfilled had one of the trains mentioned been permitted to leave a designated meeting point without meeting the other train as the order specifies. The hogger was right. He should have insisted that the portion of the order requiring Extra 101 to meet Extra 210 east at D be annulled before his train left D."

* * *

FIVE BROTHERS, sons of the late John Ward, Sr., have been firing and running locomotives on the Southern's Knoxville Division for a combined total of 165 years. This may seem like a lot of Wards, but Supt. B. L. Stanfiel says, "I wish I had 25 more of 'em." The five are Earl F., John C., Jr., Dave N., Arthur P. and William M. Ward. Together they've earned a total of about $575,000 by working for the Southern. None of them has ever operated a Diesel.

The only sister of these men upheld the family tradition by marrying another Knoxville Division engineer, M. L. Stephens, and their two sons are firemen on the same division. Moreover, the youngest Ward brother, Earl, has one son working on the division's bridge force and another as a brakeman. The father of the five engineers was retired in 1937 after 50 years with the division's maintenance of way department.

In our July, 1937, issue we published a *Spot* item about the seven sons and three daughters of Philip and Rose Thiehoff, all ten of whom learned telegraphy. Five of the boys went braking, one began railroading as a station agent, and the other started as operator, all on the Burlington. Two of the three girls married Burlington railroaders. A number of sons of the nine railroading children also are rails, while various daughters married rails.

We now hear from C. H. Knight, 232 North Ave. 53, Los Angeles 42, Calif. "As a Burlington employe, I knew some of the Thiehoffs and had considerable knowledge of their rail service. I have a high regard for that family but I believe the Grahams can match their record.

From Bob White, Saranac, Mich.

FRENCH STAMP commemorating Paul Doumer, son of a rail laborer, who became Governor-General of Indo-China and, later, President of France. Doumer was assassinated by a Russian exile in 1932

"In the early 1870s at Cameron, Ill., Sectionman Patrick Graham, Sr., lived with his seven sons, J. W., M. T., Patrick Jr., J. H., Frank, George and H. L., all eight of whom entered rail service on the same division of the Burlington. The four older boys, starting as trackmen, were offered jobs as foremen. However, all seven (except George, who became a railroad machinist) went braking and were promoted in due time to conductors. The boys had five sisters, two of whom married railroad men.

"Three of the seven died in service. J. H. died after retirement. George and H. L. are still on the job. Pat, Jr., was retired years ago. He was a conductor and foreman of a construction train for 25 years, and made the record of laying 24 miles of 100-pound rail in 24 days between Somonauk and Mendota, Ill., having to unbolt and remove the old rail, meanwhile keeping clear of heavy westbound mainline traffic.

"Pat tells of an incident that's worth repeating. Many years ago, when the four older boys were freight conductors, four freight trains following one another had as conductors these four, M. T., J. W., J. H. and Pat. This rivals an item which appeared in your July, 1937, *On the Spot*, about three brothers named Black han-

dling in succession the same train on three divisions of the Chicago, St. Paul, Minneapolis & Omaha. Getting back to the Grahams, Pat says it was not uncommon for three of the brothers to be following one another over the division, each as skipper of a Burlington freight train.

"In addition to Patrick Graham's seven sons all in rail service, he had a brother James, a trackman with three sons in railroad work. This makes a total of 12 by that family name from the same town entering rail service on the same division. That town, Cameron, gave to the one division a total of 119 men during a period of 60 years, although the community usually had a population of less than 300 souls. It is doubtful if any other village can beat that proud record.

"Pat, now about 85, is still active and makes a hobby of building bird houses. At his home, 184 W. Tompkins St., Galesburg, Ill., he has on display a large number of these bird shelters built by himself. School children, with their teachers, flock from miles around to see his unusual collection."

* * *

DETECTOR-CAR expert, T. C. Shedd, Jr., 59 E. Van Buren, Room 505, Chicago 5, Ill., found Freeman H. Hubbard's article, "Father of High-Speed Trains" (July issue), a very interesting account of the work of a man who made a big contribution to the development of high standards of track. He adds: "However, I don't believe Dr. Dudley's track-indicator car was the direct antecedent of the Sperry rail detector car. The Dudley apparatus indicated irregularities in track alignment, whereas a detector car indicates the presence of flaws in the rails, especially transverse fissures, invisible internal cracks. Many people do not realize that detector cars are not concerned with low joints or wide gage but only with the condition of rails themselves.

"Incidentally, not all detector cars are Sperry cars. Some are owned by railroads. For example, the New York Central's X-8015 uses Sperry-type apparatus, which locates defects by means of an electric current passed through the rail between the brushes. Others use a different method of detection, developed by the AAR, involving powerful electro-magnets. Also, the present standard rail of NYC main lines is 127 pounds, not 120 as your article stated."

Write-up of Dr. Dudley reminds C. L. Collom, 491 Walnut St., Meadville, Pa., of data on broken rails which he found in early Atlantic & Great Western (now Erie) reports.

"These figures," he writes, "show the results of hurried building of the road's Pennsylvania section. It was necessary to rebuild the track when they put in the second route from Titusville to President, Pa. In fact, they are laying new iron constantly. My father, who went on the head end in the 1890s, gives a good share of

TOPS FOR QUALITY
BIGGER AND BETTER

REAR MARKER LIGHTS, wrapped in cellophane, presented by C. M. Hull, NYNH&H assistant vice-president, to Clark H. Pool, Jr., of New York Society of Model Engineers. Occasion was "New Haven Night" at the Society's new headquarters in the Lackawanna Terminal, Hoboken, N. J.

Courtesy New Haven Railroad

the credit for track improvement, especially in the winters, to the raising of track by frequent heavy ballasting. He tells of early track shimmed till spikes were so far out of the ties that they had to block rail with wooden supports to keep it from turning over."

One of the A&GW reports deals with the number of broken rails for the five months ending March 31, 1867: "The distribution clearly indicates the character of the different divisions. Upon the Third and Fourth (Franklin and Warren) the number is comparatively insignificant. . . These divisions are comparatively well ballasted and in good condition generally. Not a wheel, we are informed, has been off the rails on either of these divisions for the five months past."

On the First and Second (Meadville Ry., Erie and New York City) the story is different. "Although the utmost care has been exercised (as there has been a night and a day watchman upon every section, generally four miles, before each train, which entailed an average monthly expense of $10,000), trains are daily derailed by defective rails and as high as ten freight trains have been off in a single day. Nearly 20 percent of the entire expense for labor charged to track repairs for the winter has been expended upon watchmen."

A tabulation shows 1899 and 865 rails broken respectively on the First and Second divisions during the five-month period, but only 21 and 87 respectively on the Third and Fourth.

* * *

CRISIS COMMITTEE of the Rutland Railroad, according to Lester P. Barlow, field representative, Stamford, Conn., is developing nation-wide interest in the proposal that certain farm cooperatives purchase and operate the bankrupt Rutland as a cooperative public carrier. Also, that a fleet of Great Lakes ships be established as part of the Rutland cooperative transportation system. All users of the transportation facilities, whether cooperative members or not, would be recognized as patrons, and as such would enjoy equally the savings in transportation costs.

He writes: "*Railroad Magazine* early caught the significance of these precedent-shattering proposals and has helped our cause greatly by publishing two articles on this subject, one in August '45, the other by H. H. Gross in January '47. The latter was comprehensive, showed much research and was evidently prepared with great care. Since its publication we have been receiving many requests for more information. *Railroad* heads a long list of periodicals in publicizing the possible cooperative operation of many of the nation's bankrupt railroads. There is no question but that your magazine has helped us in obtaining the passage of

amendments to Vermont laws. These recent changes will permit us to operate the Rutland RR. under Vermont state charter."

* * *

LAST RUN. "Sight of Junk Yard Too Much for Old 949; She Breaks Down," said a headline recently in the Seattle, Wash., *Post-Intelligencer*. The story, by Douglass Welch, follows:

"The Union Pacific, shameless octopus that it is, done wrong by little old engine Number 949 of the Waterville Railway. They derailed her, as it were, right on the brink of the grave. They set her on the mound outside the junk yard of M. Block & Co., and then they had the gall to claim it was Number 949's fault. They said she couldn't negotiate the kind of curve that heads into the junk yard.

"Why, shucks, up on the Waterville Railway, which runs 4.9 miles between Waterville & Douglas in the wheat country, some of the curves are so sharp that the ancient ten-wheeler looked as if she were turning around to nip at a flea on her own tail-end. Maybe it wasn't the UP's fault, after all. Maybe the little engine balked when she saw where she was going.

"Back in the days when the Great Northern was built into Seattle, engines like Number 949 were in service on the best and fastest passenger trains and were considered giants. Small boys stood with their eyes bugging out as the ten-wheelers streaked by with a plume at their stacks and four or five rollicking wooden cars in tow. As trains got heavier, those ten-wheelers were relegated to branch-line service and finally to the rip-track.

"Number 949, when her days on the GN were over, was sold to the Waterville Railway about 1910 (perhaps a little later) and she remained in service as the line's only locomotive until a year ago. Finally she wasn't able to make enough steam to cook a New England boiled dinner. The ICC put a 100-pound limit on her ancient boiler. So the Waterville people got a 200-hp. rebuilt Diesel-electric to do the work, and laid the steamer up. They sold her recently to the Seattle junkers for $15 a ton, scrap; but when the UP sought to put her in the junkyard's commercial spur, off she went."

Thanks to Gordon C. Askins, Seattle, and Lawrence B. Rankin, Everett, Wash., for clippings.

* * *

PRODIGIOUS MEMORY. C. Earl Davis, 1240 N. Wilson Way, Stockton, Calif., writes concerning L. R. Throop, whom "Milepost" Paul McGuire mentioned in the June issue: "When I knew Throop he was called 'Smoky.' One day in El Reno he asked me my watch number. Five years later I met him in Fort Smith and he repeated it back to me!"

* *

QUERY. E. P. Liston, 195 W. Orange Grove Ave., Pomona, Calif., wants to know: "How did R. V. Nixon, author of 'Test Run,' in the May issue, get Marent trestle moved from the east entrance of Mullen tunnel on the Helena branch over to the Northern Pacific's Butte branch between Home Stake pass and Butte?"

"I must say," Mr. Liston goes on, "that the author is not very familiar with the NP. He has the towns okay as far as Butte, but ignores Silver Bow, Anaconda, site of the famous Washoe Smelter, Deer Lodge, and the State Prison. He disregards Garrison and the entrance to Hell Gate Canyon, Gold Creek where President Grant drove the last spike; Bearmouth, where the *North Coast Limited* was held up; and Missoula, garden spot of Montana, in the Bitter Root Valley. There's no mention of the Bitter Root Mts., the scenic Flathead Indian Reservation, Thompson Falls, Sanders County seat, named for old Judge Sanders, known as the Hanging Judge of Montana; or of Trout Creek or Hope, Idaho, famous lumber camp.—*(Editor's note: Lack of space prevented the inclusion of much material in Mr. Nixon's article.)*

JOINT ANNIVERSARY of Santa Fe Railway and the town of Inglewood was celebrated recently. Now a historic landmark, the station above was built in the same year, 1887

Photo from Russell Gray, 3834 W. 64 St., Inglewood, Calif.

LONGEST railroad service of any man living is claimed by W. D. Lowry, age 87, freight agent at Montgomery, Ala., for the Western of Alabama and the Central of Georgia, who is now in his 75th year of service and still going strong.

* * *

TRAIN WRECKS, according to the *Mercury Herald,* San Jose, Calif., sometimes show "indications of human error and material failures. . . If a rise in railroad rates is the cure for inadequate labor and inspection and sub-standard equipment, we hope the Interstate Commerce Commission will speed its consideration of the requested increase. We also hope the railroads will go in for some serious self-examination before a passenger boycott hits their revenue as hard as it hit the airlines' last winter."

* * *

CORRECTION comes from Rail Photo Service, 93 Massachusetts Ave., Boston 15, Mass., in regard to caption on page 70 of our September issue. C&O vertical view is by Ben Butler and is from his recent C&O West Virginia series.

* * *

TERMINALS. Several readers have challenged certain findings of the Association of American Railroads in its tentative survey of freight and passenger terminals, as synopsized in our July issue. George H. Reitze, Jr., 44 Belmont Ave., Jersey City 4, N. J., asks plaintively why the CNJ-B&O-Reading terminal in his city, with 18 tracks under the shed, was omitted. John Kidd, 2044 Greenway, Charlotte, N. C., expresses similar concern about the Atlanta, Ga., terminal, which is used by the Southern, the Seaboard, the Central of Georgia, and the Atlanta & West Point, and Atlanta Union Station, served by the ACL, the L&N, and the NC&StL. The answer in each case is that the printed results of the AAR survey were plainly stated to be only tentative, not complete in detail, and our synopsis hit only the high spots of the survey.

Ray Lowry, 719 S. 30th St., Omaha 5, Neb., explains the track-level situation at Omaha Union Station by saying that the high, or upper, level has the regular passenger train yard and facilities, while the lower level is on a side hill north of the station. The lower-level tracks have a few spurs to the UP Commissary and a cream dock. "This," he adds, "is a poor comparison to the two levels at New York's Grand Central, Washington's Union Station, and Philadelphia's 30th St. Station."

We now hear from Walter M. Ireland, 364 Bard Ave., Staten Island, N. Y. "Many readers must be wondering by what super-railroading New York's Penn Station handles so much traffic on 21 tracks. The AAR figures you cited show

345 through and 600 commuter trains, 189,000 through and 133,000 commuter passengers, daily. Obviously these could not be handled on 21 stub-end tracks. The tracks run through the station. Westbound traffic is handled by the Pennsy and eastbound by the Long Island, all on the same tracks. Thus for most purposes the station has 42 tracks. Also, by routing most through trains in a straight-line movement, more traffic is handled than could be done on 42 stub-end tracks.

"The *Sunshine Special,* serviced and made up in Sunnyside Yards, Long Island, is run west to the station, loaded, and proceeds westward on its run. Eastbound it is handled reversely. Stub-end switching is unnecessary. Trains passing through New York are handled similarly. If *The Senator* heads in from Washington on Track 6, she leaves on the same track. No switching nor reverse movements. All trains are electrically operated.

"Suppose Chicago Union Station tracks were similarly arranged, as I believe one or two are. *The Olympian* could be made up in the PRR yard, could head in on Track 8, load, and pull out on the same track. The *Broadway Limited* could be made up in the Milwaukee yard and come straight through, with no switching, except mail cars."

* * *

COMB'S MONORAIL, Jack Wagner's article on the Wupper Valley Railroad in the September '47 issue of *Railroad,* draws this comment from Otto Kuhler, design engineer for ACF: "It is not generally understood that this road was formed out of necessity. The Wupper River flows through a very narrow valley, in many spots not more than one-half a mile wide, and into this valley two large cities have been squeezed with six railroad tracks and two highways on each side of the river. In short, it is one city half a mile wide and about eight miles long.

"The only open space left in this valley was directly above the Wupper River, and it is there that this railroad was constructed because there was just no other room left in which to build a rapid transit line through the twin towns of Eberfeld and Barmen. I believe that this unusual situation, combined with the narrow width of the town, made this system economical.

"I might add that I have ridden this railroad probably a thousand times and do not remember ever to have heard of an accident of any kind."

* * *

RKO-PATHE documentary film, *Whistle in the Night,* packs a comprehensive study of present-day railroad conditions into eighteen minutes running time. Glamour of shots showing locomotives and streamliners whizzing across the countryside leads into sequences dealing with the public services which the railroads have made their own. Operations of big-city terminals and classification-yard proceedure are some of the other features of this interesting study in RKO's THIS IS AMERICA series.

* * *

LAST STOP is the Reader's Choice Coupon *(page 145),* which guides your editorial crew in selecting material for future issues of *Railroad Magazine.*

Some readers use the coupon. Others prefer not to clip the magazine; they send home-made coupons, postcards or letters. Regardless of how votes are written, all count the same. Results of balloting on the September issue show these titles listed in order of popularity:

1. Denver West, to Salt Lake, *Bollinger*
2. Engine Messenger, *Monroe*
3. True Tales of the Rails
4. Light of the Lantern
5. On the Spot
6. Electric Lines
7. Sing Us a Song, *McClintock*
8. Swiss Centennial, *Kennedy*
9. Dave Moffat's Dream, *Hough*
10. Locomotives of the Canadian Pacific

Most popular Photos: pages 70, 39, 142

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ITEMS sent to the *Switch List* and *Model Trading Post* are published free, in good faith, but without guarantee. Write plainly and keep 'em short.

Because of time needed to edit, print and distribute this magazine, all material should reach the Editor eight weeks before publication date. Redball handling is given to items we get the first week of each month, if accompanied by latest Readers Choice coupon (clipped from page 145 or home-made).

Due to scarcity of space, we prefer that no reader be listed here oftener than once in three months.

(R) indicates desire to buy, swap or sell back issues of *Railroad Magazine* or its predecessors, *Railroad Man's* or *Railroad Stories. (Specify condition of each copy.)*

(*) indicates juicefan appeal.

RAILROAD CAMERA CLUB is open to all who collect railroad or streetcar pictures or other railroadiana such as timetables, passes, train orders, trolley transfers, magazines, books, etc. There are no fees, no dues.

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Switch List

BOB ABERNETHY, 76 Duke St., Granite Falls, N. C., wants So. Ry. CG&O eng. pix; neg., any RR; also ACL, Seaboard, Virginian.

JIM ADY, 333 Ximeno Ave., Long Beach 4, Calif., will buy Vol. 1 *Trains* for $12 bound, $10 unbound.

SR. DN. MIGUEL LOZANO ALVAREZ, Consejo de Administracion Renfe, Santa Isabel 44, Madrid, Espana, wants to corres. with rr. Am. girls, change booklets, pamphlets of both countries.

(*) RICHARD J. ANDERSON, 4607 N. Marmora Ave., Chicago 30, Ill., will sell large number size 116 negs., pix; specify steam, elec.

(R) LEE BEAUJON, Canaan, Conn., has *Railroad Magazines* '27 to '30; issues 700 pg. *Mundy's Earning Powers of RR's.*; NH emp. tts., emp. mags., annual reprs.; 2 *RR's. on Parade.* Wants CNE data.

WM. E. BRANDT, 3024 N. Kenneth, Chicago 41, Ill., will buy good neg. C&EI 1007.

Rail Photo Service, 93 Mass. Ave., Boston, Mass.

EAGLE-EYE'S VIEW on the Canadian Pacific. Streamlined 2-10-4 and 2-10-0 oilburners in heavy action east through Kicking Horse Canyon

(R) FLOYD BRUNER, East Marion, N. C., will sell 33 Sou, 20 B&O, 20 misc. emp. tts.; *Railroad Magazine*, Jan. '34, Apr. '38, Sept. '42, bad shape; Sept.-Dec. '45, fair shape; '46-'47, good cond.; 30 tts., also colored folders; compl. lot, $20 plus post.

(*) J. M. CAMPBELL, 135 27th Ave., San Francisco 21, Calif., has ltd. number defunct Market St. Ry. St. Car shields to highest bidders; red and white porcelain plated over metal.

H. A. CLAUSEN, 109½ No. Teion St., Colorado Springs, Colo., will sell *Poor's Manuals* 1891, '92, '93, 1900, '04, '05, $3 ea., good cond.

RICHARD F. COBURN, 1541 N. Caroline St., Baltimore 13, Md., wants pix SP, *Daylight*, AC 4-8-8-2, Colorado n. g. lines. Buys, trades railroadiana.

HARRY COTTERELL, Jr., 36 Alexander St., Newark 6, N. J., wants pix Middletown & Unionville 2-6-0 type from DT&I; also const. data and ex-number. New size 122 pix DT&I eng., trains for trade, sale.

(*) HOWARD DOBSON, 3300 West 123rd St., Cleveland, O., offers 3¼x4¼ size pix abdn. interurbans, Cleve. S. Western, 5 for $1, set 8 $1.50; Northern Ohio Tract., 25c ea.; Lake Shore Elec., set 3, 35c; others; no checks.

(*) ROBT. ELLISON, 418 5th St., Petaluma, Calif., will sell short line emp. tts., transit tokens, p.c.'s, other rr. material. Send 3c stamp for new list.

DAVID ENGMAN, Concord, R. F. D. #2, Mass.,

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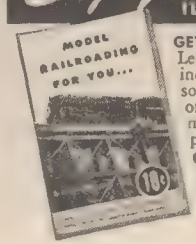

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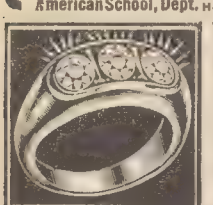

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J. HARRY FELDEN, 3345 Richmond St., Phila., 34, Pa., will buy '34 to '37 unbound volumes *Model Railroader*, good cond.

HOWARD E. FERGUSON, 728 Sandwich Rd., East Wareham, Mass., will trade stamps pertaining to RR's., R. P. O. cancels.

WM. J. GARRETT, 1131 Fulsom St., Flint 7, Mich., will pay reasonable price for pix size 8x10 Diesel locos, pref. DL&W, Erie, NYO&W, LV, NYS&W, D&H; switchers, NJC, SF, SP.

DELBERT GERBAZ, 2700 Ave. J, Ft. Worth, Tex., has Colorado Midland pix for trade for other CM, DRGW, n. g., other n. g.

(*) EDW. T. GIBBS, 729a Macon St., Brooklyn 33, N. Y., has pix Eastern St. Car Co's., size 620, 616, 10c ea., 12, $1; wants negs., pix ferry, excursion boats; also cars, buses Conn. Co.

(*) R. A. GILCHER, 34 Wildwood Ave., Mt. Vernon, N. Y., will sell or trade st. car negs., pix.

(R) ELMER GRAY, Jr., 2602 E. Walnut St., New Castle, Ind., will buy *Railroad Magazine*, Apr. '34, Oct. '44, Dec. '46; Jan., Feb., Mar., Apr. '47; also roster, emp. tts. NKP.

(R) JOHN P. GREGG, 204 Kreitzer Ave., Bloomington, Ill., wants *Railroad Magazine* Dec .'45; collecs. mags., tts.; wants any tts. TH&B.

ALBERT C. HALE, 82 Roberts Rd., West Medford 55, Mass., has size 616 negs. B&M, NH, B&A, for sale, trade. Sell 5x7 glossy enlargements NE trunk, short line trains, locos, 30c ea.

(R) J. FRANK HAMBLEN, Carolina, R. I., has *Railroad Magazines*, Jan. '46 to present date exc. Oct. 46: 25c. ea., cond. excell.

HANK HARVEY, 2044, Iola Ave., El Monte, Calif., collects p. c.

A. E. HEATHERINGTON, Rt. 3, Box 519, Orlando, Fla., will sell *Off. Guides* Nov. '39, July '41, Sept. '41, Sept. '41, 75c ea. p.p. All perf. cond.

(R) WALTER E. HOXIE, Box 943, Providence, R. I., will sell or swap back issues *Railroad Magazine*, *Model Railroader*, Buck's *The Electric Railway*, '15 textbook, $2.50.

Pvt. GENE HIGGINS, 504 Ord. D. S. P., Okinawa, has interesting pix former Ohinawa RR., now destroyed.

(R*) WALTER HULSEWEDER, 1383 DeKalb. Ave., Brooklyn 21, N. Y., has *Railroad Magazines*, 5 '42; 10 '43; 3 '44; 4 '45; 8 '46, 1 '47, unclipped, 25c ea., lot for $7. Also negs. Conn. Co., LVT, PTC, PST, P&W, E. Mass. St. Ry., Cap. Tran., etc., 5c; Vp. RR. elec., bus tts., 12 for 10c, 144 $1.

A. B. JEFFERS, Piedmont, Mo., will buy, trade or borrow for copying any miniature tr. pix; has negs. all pix in collec.

HOWARD E. JENKINS, Box 57, Swarthmore, Pa., wants pix old engs., rds. east of Miss. State price, size.

LAWRENCE C. JORCZAK, 4111 S. Rockwell St., Chicago 32, Ill., will sell to best offer *Off. Guide*, Sept. '41, June '42; Manila RR tt. Feb. 7, '38; also Q tts. (emp.), sell, trade.

(R) ARNOLD B. JOSEPH, 2512 Tratman Ave., New York 61, N. Y., has *Railroad Magazine* '35 to '47; *Model Craftsman*, other hobby books for sale; takes ords. any type mag. wanted by collectors. List, details for stamped env. For sale, trade, tts., emp. tts., tr. ords., clearance cards, railroadiana.

PETER KECATOS, 624 Vanderbilt Ave., Brooklyn 17, N. Y., will sell emp. tts., 75c ea., L&N, DRG&W, B&M, NYNH&H, Cumberland & Penn., Ill. Cent., C&O, Milw.; books, *Clear the Track*, $2.50; *Railroading from Head End*, $3.25; others.

BETTYGEAN KIDD, Sutton, Nebr., will sell 6 western Australian eng. pix, 2½x4¼, $1 for set (no exchange). Forward money to above address, or to Ceo. Stokes, 143 Crawford Rd., Maylands, Western Australia. Wants all those to whom she owes pix, money, letters, please contact.

(R) C. B. KRUSCHKE, Box 1078, Clearwater, Fla., wants *Railroad Magazine*, Nov. '32, Apr. '34; has new list size 116 pix; 10c sample, list. Wants loco neg. sizes 35 mm, 120, 620, 116, 616.

(R) MARVIN LANDSMAN, 1475 Grand Concourse, H Bldg., Bronx 52, New York, will sell *Railroad Magazine* Dec. '39 to July '47, perf. cond., to best offer by lot, yr., single issue. Will accept tokens instead of cash.

(R) GORDON LLOYD, 847 Roscoe St., Chicago 13, Ill., will sell *Railroad Magazine* Nov., Dec. '31, Mar. May, Aug., '36; Nov., Aug., Jan., Apr., May '44 for $3.50; also *Elec. Trac.* Sept. '29; *Mass. Tran'sn.* Jan. '40, '41; *Transit Journal* for $3.25. Won't break sets.

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RUFUS B. McCALL, 182 Peachtree Way, Atlanta, Ga., has 5 '45, '46 *Off. Guides.* Make offer.

(*) ROBT. McLEOD, 731 So. 28th St., Milwaukee, Wis., will buy, sell or trade size 116, 616 pix, negs., TMER&T, CR&IC, CSL, CNS&M, CSS&SB.

(*) PAUL J. MERLAND, 2579 Marsh Ave., Norwood 12, O., will sell Sunday passes, various dates, few school passes, pix Cinn. St. Ry., *Model Railroaders, Model Craftsman, Model Builder, Trains* '42 to present; excell., fair cond.

E. R. MUNSCHE, 584 Chestnut St., Neenah, Wis., has *Baldwin Locos,* good cond., Jan. '32 to Apr. '33; Apr. '34; Jan. '35 to Apr. '36; Jan. '37; Apr. '38; Oct. '40; will sell $12. p.p. or $1 ea. p.p.

(*) CHAS. J. MURPHY, 1522 White Pl., S. E., Washington 20, D. C., will sell full roster Capitol Transit Co., '33 to present. Member Wash. ERA.

JOS C. PAUKEN, 313 E. Dudley. Maumee, O., wants pix. info. steam or Diesel Wabash engs.

(*) M. POWELL, c/o Station Master, SPRR Oakland Pier, Oakland 7, Calif., has foreign contacts wanting rr. tkts., trolley trsfs.; has foreign, Amer. railroadiana.

(*) STAN RAFFEL, 3311 W. Garrison Ave., Baltimore 15, Md., will sell *Trains,* Apr. '43; Mar., July, Aug. '44; June, July, Aug., Sept., Nov., Dec. '46; Jan., Feb., Mar. '47; lot $2.50 p.p., 20c ea. Wants pix W&OD, BTC, CTC, WB&A, B&A, H&F juice lines. Send list, prices.

J. 'CASEY' REESE, Fairmont, W. Va., will trade size 116 pix B&O Mallets for size 116, 120 pix UP, WP, NP Mallets.

(R) ARTHUR J. RICHARDS, 21 Briarfield Rd., Tyseley, Birmingham, England, offers British rwy. tkts., tts.; elec. tramcar tkts. in exchange for good pix U. S. steam locos, all rds., early, modern types or back issues *Railroad Magazine, Trains;* esp. pix early Am. locos.

LEE P. RIDGMAN, 22 W. 137 P., Hawthorne, Calif., wants *Loco Encyclopedia* 1922.

JACK RYAN, 5055 N. Wolcott Ave., Chicago 40, Ill., will sell pix various rds., sizes; many builders pix; also tts., emp. mags., tr. ords., passes, circulars, etc.

EUGENE SAKS, 134-43-230 St., Laurelton, N. Y., wants tts. Newfoundland Rwy.; will give esp. prepared history Long Island RR.

ROGER SEARBOROUGH, 1010 East 9 St., Austin, Texas, has pix SP, MP, AT&SF, MKT, size 116. Stamp for list.

(*) F. R. SENFTEN, Otis Elevator Co., Apartado 668, Caracas, Venezuela, wants to buy pix elec. locos; any type industrial, mining, etc.

(*) WALD H. SIEVERS, 251 Miller Ave., Mill Valley, Calif., sells 5x8 pix NWP elec., 75c ea. Swaps trsfs.

W. PAUL SWEET, 725 19th St., N. W., Washington 6, D. C., has pix many loco, Eastern rds., size 616 to swap for old brass baggage checks, 3 pix for ea. check. Also wants large uniform buttons.

WALTER H. TAUBERT, 18 Grant Ave., Amsterdam, N. Y., wants emp. tts. (newest) NYC, pix NYC Niagara 6000 eng.; Diesels Western lines; new west. tts.

E. H. TEES, 925 Gilbert Rd., Cheltenham, Pa., wants *Baldwin* mag., Apr. '26.

(*) ROBT. VAN BUSKIRK, 120 Chestnut Ave., Jersey City, N. J., will trade, sell pix New Jersey, Pa., Conn., N. Y. elec. lines. Will buy Public Serv. of N. J. negs. prior to '36. List. sample pix, 10c.

(R) E. P. VERDONCK, 8 Nelmar Ave., St. Augustine, Fla., has *Railroad Magazines,* Dec. '46, Aug. '43, perf. cond.; also PRR calendars. Make offer.

(R) GEO. WATEROUS, 1474 Winnemac, Chicago 4, Ill., will sell *Railroad Magazines;* has compl. file.

EDW. H. WEBER, 8 Garden Ave., Chatham, N. J., has maps abdn. rrs. N. J., 15c ea. State name of rr.

(*) A. P. WEBSTER, Houston 10, Texas, member B. of R. C. local #84, collects trolley, bus line tokens. Has about 300 for trading.

GORTON T. H. WILBUR, The Jacksonville Broadcasting Co., Jacksonville, N. C., will buy pix old, modern observation trs. used on Central Vermont, New Haven RR's. during Harvard-Yale crew races; likewise observation trs. on NYC during Poughkeepsie regatta. Also info. wrecks and notables traveling these trains.

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JOHN CHURCH, 130 Campbell Ct., Midland, Mich., will sell 8 pairs 4 wheel pass. trucks, 3 pairs frt. trucks to highest bidder.

(R) A. F. CLOW, 503 Randolph, N. W., Washington

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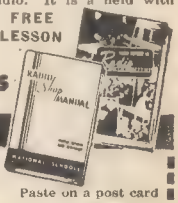

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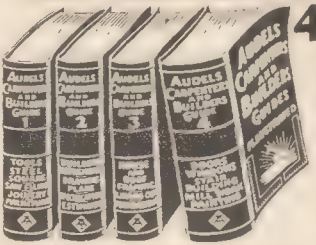

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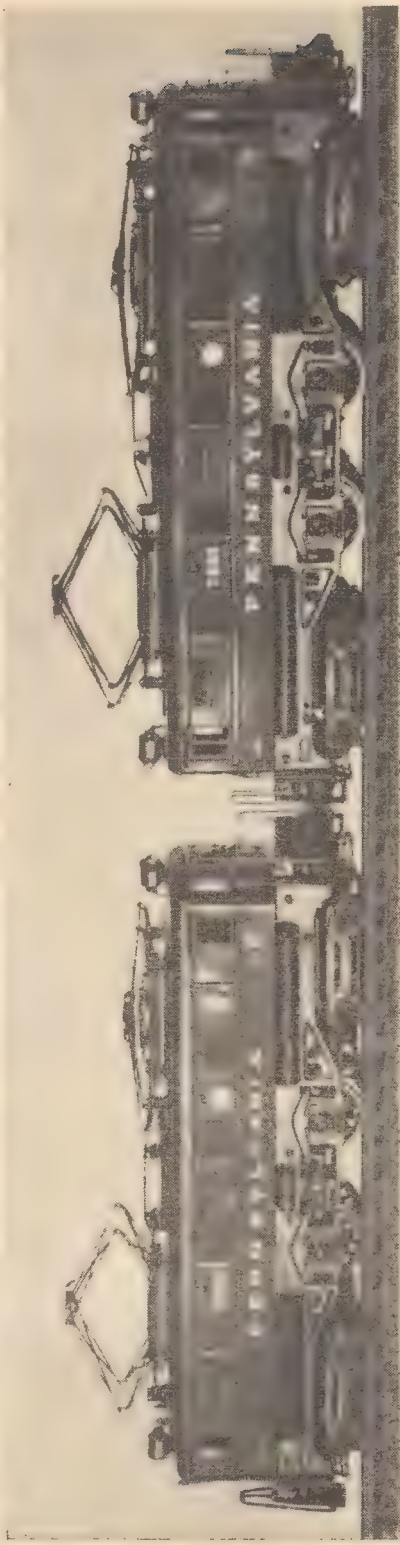

PROTOTYPE-preference poll revealed widespread popularity of PRR's 0-1 Class, a husky little electric jack ideally suited to reproduction for model railroad service. So top-flight custom model builder Fred Icken has applied his know-how to a precision-machined O-gage kit which is inexpensive and simple to assemble. Here are two of the motors on the test track of Icken's Harrington Park, N. J., shop, where they are undergoing exhaustive trial runs

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Is stamped envelope enclosed for Camera Club pin and membership card?..... Railroad Magazine, 205 E. 32nd St., New York City 17.

11, D. C., will trade or sell *Railroad Magazines, Model Railroader, Craftsman*, calendars '34 to date for HO eqpmt., incl. Marklin, Trix, don't send ret. pstge.

R. L. DUCKWORTH, 303 Jester Ave., Ferndale 20, Mich., will buy or trade O gage eqpmt., scale, tinplate, 3-rail only. Corres. with O gage model railroaders.

WALTER E. HOXIE, Box 943, Providence, R. I., will sell or swap Lionel 408 std. gage. twin-motor loco, $18; J. W. Bowker O gage loco, combine car, $85; new Gilbert S gage Hudson loco. $25; Gilbert S. gage Pacific, no smoke, $17.50. Wants Lionel manual, r. c. switches, switching engs., Hudson loco.

WALTER HULSEWEDER, 1383 DeKalb Ave., Brooklyn 21, N. Y., will sell Lionel O gage *Blue Comet*, built in whistle, track crossing gates, watchman, bridge, diner, excell. cond. to top bidder.

GEO. A. KEHL, Mendota, Minn., exper. RR. machinist, sells new precision built HO locos reasonably.

JOHN R. KOCH, 5 Main St., Joliett, Pa., will sell AF 806, 4-8-4 loco, tender, excell. cond. or swap for Lionel 225EW or switcher.

B. LANE, 1315 Vassar Dr., Kalamazoo 27, Mich., will pay cash for old std. gage locos, cars.

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CARL LUPKE, 771 East State St., Trenton 9, N. J., will buy 10 sets (2 wheels mounted on axle) Am. Model RR. Co., ¾ in., O gage oxidized brass pass. car wheels, good cond. Advise price before shipping.

JOHN MARSHALL, 670 Prairie Ave., Providence, R. I., will sell new TT gage Diesel pass. set, list $40, for $35; HO built-up Mogul loco, $35; Consolidation loco $45; 3 diff. Mantua reefers, $9; 10 diff. Varney box car kits, $16; Hungerford's *A Railroad for Tomorrow*, $5 book for $3.75. Cash or Lionel 072 material.

RALPH M. PERRY, 48 So. Main St., Brattleboro, Vt., has considerable std. gage tinplate; sell or trade scale ¼ in.; complt. list for stamped env.

W. D. RICHARDSON, Box 2044, Windham, O., wants Gilbert HO eqpmnt.; what have you for sale, cash or stamps; wants pix, info. on frt. cars 1860 to 1910, pref. latter.

ROBT. T. VAN BUSKIRK, 120 Chestnut Ave., Jersey City, N. J., will sell 3 Lionel 116 coalcars, $1. ea.; 2, 112 gondolas, 75c ea.; 1, 113 cattle car, $1.25; 125 sections Lionel curve, 8c a section; pr. 021 switches, $3 List O gage eqpmt., 3c stamp. Wants O gage trolley motors, movie-screen.

Rev. JOHN S. WILLIAMSON, 11 Smith St., Sodus, N. Y., has Horaby (Meccano) clockwork engs., large assortment English frts., pass. for sale, O gage.

Flagstops

THE VON L. SALES CO. announces $1100 Cash Award Photo Contest. Negatives must be exposed and developed in Von-L gold XX after July 1st, '47—ask your photo dealer for entry forms, rules. All prints will be judged by The Chicago Chapter of the Photographic Soc. of America, and will be judged for the Grand Prize awards. Hold your own Club Pix Contest and send the winning print in. Orville Stamm, Distributor, Mon-Blanc Chemical Co., Suite 556, 35 East Wacker Dr., Dearborn 3979, Chicago 1, Ill. Contest closes at midnight October 14, 1947.

National Model Railroad Assn., Northwestern Region, will hold its fall meeting Oct. 11, 12, '47, at Worcester, Mass., with headquarters in the Sheraton Hotel. Schedule includes tour of New Haven Terminal facilities, model contest judging, group trips, etc. Registration fee for convention is $3.50. Write to Co-Chairman Harold I. Clark, 28 Paine St., Worcester, Mass., for N.E.R. convention flyer.

National Railway Historical Society is offering memberships to all fans interested in steam and electric railroading, fan trips, etc. Free illustrated quarterly publication, other benefits. Membership fee is $2.00 per year. Write to E. L. Pardee, 626 Park Avenue, Collingswood, N. J.

KNOW YOUR B&O is representative of a new approach to familiarizing RR employes with basic factors pertaining to their industry. B&O's booklet is humorous, graphic, contains more cartoons, maps, graphs than text. New Haven, Jersey Central and others are using the same quick assimilation approach. Copies of this and other B&O quiz booklets, cryptograms, etc., are being sent to 60,000 employes.

A Hobby Fair is being sponsored by the Lutheran Laymen's League of Greater St. Louis. Dates are November 15 and 16. Model Railroad, Railroad Photograph, Juicefans and Hobbiests of all kinds are invited to write for details to L. S. Merrell, 5242 Wabada Ave., St. Louis 13, Mo.

Single copies of TRANSPORTATION, April '47 issue, containing a lively history of the Brooklyn, Bath & West End RR., a summary of Brisbane, Australia, trams, etc., are available for 25c from the business agent for the Connecticut Valley Chapter of N.R.H.S., Mr. Roger Borrup, Warehouse Pomt, Conn.

The Westchester Model Club will hold its annual exhibition at the Pelham Manor, N. Y., station of the New Haven R. R. on Oct. 31, Nov. 1-2; Nov. 7-8-9; Nov. 14-15-16. Hours are 7:30 to 10 p. m. on Fridays and 2 p. m. to 10 p. m. on Saturdays and Sundays. As was done last year, the exhibition is for the benefit of the Tribune Fresh Air Fund.

Railroad Enthusiasts, New England Division, announce resumption of B&M's 400-mile 'Round the Mountains Fall Foliage Trip.' Date is Oct. 5th or 12th. Write Cyrus Hosmer, Jr. Trip Chairman, 34 Chester Rd., Belmont 78, Mass. The Enthusiasts' New York Division will hear Mr. C. F. Bayer, DL&W Purchasing Agent, in an address on dining car department operation at 7:45 p. m., Oct. 22nd, Rm 5930, Grand Central Terminal.

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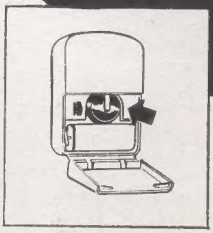

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